The Hunterian Oration

ON

HUNTER AND LISTER,

AND ON

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND,

DELIVERED BEFORE THE COLLEGE ON FEBRUARY 14TH, 1913,

BY SIR RICKMAN J. GODLEE, BART., M.S.LOND., F.R.C.S.ENG., HON. M.D.DUB.,
PRESIDENT OF THE COLLEGE, ETC.

GENTLEMEN,—The picture which on these occasions hangs over the head of the orator was, as is well known, painted under peculiar circumstances. John Hunter was urged to sit to Reynolds by his friends, and principally by Sharp the engraver, who, with strange prescience, foresaw that his engraving of the portrait would prove to be his *chef d'oeuvre*. But Hunter objected; he thought it almost as great a waste of time as he did only four years later, "when he fairly wished Sir Joshua and his friends at the devil when called on to take part in the funeral of this eminent artist and delightful author." Besides, he would not allow them to pay for it, and he had always more than enough use for his own money. At last, however, when he was 60 years old, he yielded. It is easy to imagine him—and with much sympathy—fuming and fidgeting in that great armchair, with the description of his specimens (on which he set great value, but which was burnt after his death by Sir Everard Home) at his side. Time after time the master tried to catch his likeness, but without success, and he was almost giving up in despair, when suddenly on Hunter's face came this rapt expression, as, with his mind fixed on other things, he ceased to be worried with his surroundings. Quick as thought the canvas was turned upside down, and between the original legs appeared this face, which even in the present cracked and faded condition of the picture has been the admiration of succeeding generations. We have been blamed for having allowed it to become so ruined, but possibly the way in which it was painted may partly account for the disaster.

Look at the picture! I have gazed at it, in season and out of season, for half a lifetime trying to guess what was the thought that calmed and possessed his restless mind. And now, at last, I seem to know. For one thought occurs again and again in all his writings, and speaks to-day from his museum to him who grasps the idea of its arrangement: *What is Life?* That mystery which baffled the intellect of the ancients and which still, *pace* Professor Schäfer, is awaiting solution. What is Life? And then I recall his strange formula, which haunts the memory like a sort of wild refrain, "*Body, Blood, and Motion!*" When the motion of the blood stops the blood dies; and then the body dies, some parts of it sooner, some later; but it dies, although there is no difference in its constitution perceptible to the senses. Truly as he observes, "mere composition of matter does not give life; for the dead body has all the composition it ever had. *Life is a property we do not understand; we can only see the necessary leading steps towards it.*"

We all admire the picture. But what would we not give to see for a moment the failures which still exist under the paint at the lower part of it? That would be a likeness of the real man such as we can only gather from hearsay.

LONDON IN THE TIME OF HUNTER.

If he were to slip out of his frame into our midst it would give us a shock to see, instead of that inspired philosopher, a sturdy, thick-set man in a brown, eighteenth century full-skirted coat and breeches, a bull neck, an underhung jaw, thin white hair that had once been red, and such an eager manner and such a sparkling eye! He could not have stepped into this theatre, for the place where our College stands was occupied by residences, except one part in the rear, where there was an old theatre giving on Portugal Street. But I can imagine him crossing the open treeless square, with a pond in the middle, and making his way by Queen Street and Long Acre or the Strand to his house in Leicester Fields. He would hardly have ventured on a cross-cut through St. Giles's, for even in my young days it was a questionable district for respectable pedestrians. I think of the people he might have met; Dr. Johnson, blinking as he groped his way towards the Cock Tavern in Fleet Street; Fanny Burney, the novelist, bowing from her sedan chair to Edmund Burke or Wyndham; "Sir Roger" in his coach and four; Mrs. Siddons or Garrick stepping towards Drury Lane; the refined Percival Pott, his greatest rival, or Warren Hastings with his anxious face. And one might wonder that he is scarcely mentioned in the writings of Mrs. Montagu or Madame Piozzi, and that he does not seem to have mixed much with the distinguished intellectual circle whose names are still to us household words, if one did not think of the enormous amount of work which Hunter crowded into the forty-five years after he left Scotland at the age of 20, with no great reputation for diligence or application. I see the strange dress of the common people, and hear the noisy rumble of the huge wagons, and the "cries of London"—that little London of 500,000 or 600,000 inhabitants, which in 1740 did not extend beyond Old Street, Queen Square, and Portman Square on the north, "Tyburn Tree" and Westminster on the west, Mile End on the east, and was connected by two bridges only with the small borough of Southwark, enclosed by the upward loop of the river. It was like a great isolated country town, and from this square ten minutes' walk led to green fields and farms and streams and primroses and footpads. At Leicester Square his great yellow coach, which had crossed the drawbridge at the back of his house leading into Castle Street, would be waiting for him, and his coachman would drive off with his two bay stallions to his country house at Earl's Court. If Leicester Square was at all in the state I first remember it, it must have been a waste indeed. He would go down Coventry Street, looking much as it does now (though Regent Street did not exist), and along Piccadilly, then occupied only by the mansions of the great. Passing St. George's Hospital he would turn to the left down Bell Lane, now the Brompton Road, through fields with hedges and trees, till he reached his destination at Earl's Court, two miles from London.

Pictures of the house show it as a plain stuccoed villa, evidently built in stages, standing in grounds of moderate dimensions. It looks uninteresting, but we know that there were caves and dens of the earth, in which wild beasts were kept and from which they sometimes escaped; and coppers in which the skeleton of a giant could, if need arose, be quickly freed of its flesh. Other strange animals roamed about the park, and a stuffed crocodile hung, like a presiding saint, over the front door. Within were carried out all sorts of investigations; for it was to Earl's Court that he retired whenever he was able—too far from London for casual interrupters, but not far enough to miss calls of great importance or urgent necessity. There, no doubt, many of the preparations were made, if not mounted, which found their way into the Museum at Leicester Square.

HUNTER'S MUSEUM.

There is an engraving of No. 28 at the south-east corner of Leicester Square, and we can picture the front parlour and the study, and afternoon bedroom, and the print room, and the sedan chair standing in the hall. He bought the lease of this house and of one at the back in Castle Street, and between them he erected a building at a cost of over £3,000. On the ground floor were the great parlour for weekly meetings of his medical friends and a theatre for his lectures. Above it was the museum, lighted from the top, 52 ft. long and 28 ft. wide, with a gallery all round. The house in Castle Street was used for the different branches of human and comparative anatomy, for his printing press and publishing departments, and contained a sitting room for his students.

Let us try to think what this museum was like and why it was formed, for it seems strange for a busy surgeon to devote a large part of his house and a very large part of his life and nearly all his fortune to the formation of an enormous anatomical museum. One could not imagine

such a collection now in Harley Street or Cavendish Square.

In the first place, it must be borne in mind that Hunter was a man of phenomenal industry, whose mind was interested in everything to do with nature; to him the pursuit of natural history amounted to a passion—a passion that many of us can sympathize with, "for Nature never did betray the heart that loved her." But it must also be remembered that he possessed in an almost exaggerated degree the mania for collecting, which is also a vice not quite unknown amongst my audience, who sit on Chippendale or Empire chairs, speculating on the works of the Old Masters. Another vice he had which is shared by too many of our profession. He only thought of money as a means for gratifying his ruling passion, and so he crowded his house with works of art, and his museum not only with specimens which illustrated his novel views of physiology, but with others interesting only from their rarity or beauty. He thought no more of spending £500 for the skeleton of the Irish giant, or buying a picture by Zuccarelli, or Hogarth's prints, than is now thought of paying a thumping sum for a sixteenth century bronze; and though he took the keenest interest in his patients' diseases, he looked at the "damned guinea" only as the means for enriching his collection; and so it is no wonder that he left little to his heirs besides this incomparable Museum.

But it must not be thought that this was a mere *omnium gatherum* of everything that came in his way—very far from that. It only needs to examine the specimens now in the Museum, all religiously distinguished by their two black figures, to appreciate that either he never put up anything except the best—which is not likely—or that, like a true collector, he eliminated all except the best; for they are nearly all of superlative excellence, and illustrate in a striking way the particular object for which they have been preserved—that is, the physiological or pathological process, not the mere isolated anatomical fact.

It is almost inconceivable when looking through Hunter's posthumous papers that out of this apparent chaos such a definite plan could emerge as the groundwork of the Museum. One is lost amongst such subjects as the sociability of man and animals, the rising of animals, air in the bowels, the mind, fossils, or parts whose uses are not known. No one can attempt to summarize such a vast variety of material, but we may gather from Clift's catalogues, which were copied from Hunter's manuscript and from Owen's careful appreciation of them, the system on which the original museum was arranged. That, however, would be going over well-trodden ground, and I will therefore, though the prospect may seem dull enough, try to explain to what extent the arrangement of our present museum follows or departs from the plan of the master.

In an advancing science like ours too slavish a worship of the past could only lead to stagnation, and therefore some modifications have been made, although it has been the wise custom of the succeeding conservators to think twice or three times before such innovations were introduced.

If Hunter were really here to-day and asked how we had occupied our stewardship, in the first place I should be dreadfully alarmed, as being in the presence of a man endowed with many of the attributes I most admire without possessing, such as intense diligence, absolute exactitude, the power of abstraction and unlimited patience, and at the same time in that of a remorseless critic of the absence of those qualities in others. However, after invoking the support of our conservator and the two curators, who would admirably defend me, I should invite him to walk through our Museum. But first I should tell him that his collection waited in its original abode till 1800, when it was taken over by the College, and that during that time it was carefully watched over, kept clean, and dusted by his trusty assistant Clift.

The Conservators of the Museum.

Clift, it may be observed, was born in great poverty and was sent up from Devonshire by Hunter's sister, and was engaged by him on February 14th, 1792, a year and a half before his death, without fee, to write and make drawings and dissect and take part in the charge of the museum. Poor faithful Clift! He got 7s. a week for seven years from Matthew Baillie and Home, and kept patiently dusting and cataloguing. At last, when the Government gave £15,000 for the collection, and subsequently £12,500 in addition, and the College gave £21,000 for the building of the first museum, he was made the first conservator. He held this post till 1842, when he retired on account of ill health, with a pension of £400 a year.

And here I should slip in the piece of information that the College has spent not less than £500,000 upon its construction and maintenance up to this time.

Clift saw the incorporation of several other museums, such as those of Blizard, Astley Cooper, Heavyside, Brookes, Liston, Langstaff, South, Howship, and other famous surgeons. He had not brains enough to enlarge it himself, but he was sincerely devoted to the memory of his master—I had almost said he was an abject worshipper—and with the assistance of his son he got it into order for display and development by the more distinguished men who followed him.

The first of these was Richard Owen, a man of a different type, whose very aspect suggested cerebral hypertrophy. He was appointed assistant conservator in 1827, and full conservator in 1842. So he worked long with Clift, married his daughter, and was thoroughly imbued with his father-in-law's hero worship. He became a comparative anatomist and palaeontologist, and added many of those weird forms which now occupy the floor, glyptodons and megatheriums, and the giant elk, and fossils by the gross. But his great work was the publication of the memorable descriptive and illustrated catalogue of the physiological series of comparative anatomy, to which department he made important additions. Owen's was a stressful reign; for he could ill brook control, and the Museum committees were frequent and stormy. And so, great man though he was, he left, without a vote of thanks or regret, to take charge of the Natural History Department of the British Museum in Bloomsbury in 1856.

Then came Quekett, of the Quekett Club fame, who had been student dissector at the College and assistant curator since 1842. He was essentially a microscopist, one might say a born microscopist, for his father was one before him, and at the age of 16 he gave lectures on microscopical subjects, illustrated by a microscope he had made for himself out of a roasting jack, a parasol, and a few pieces of iron he had purchased at a neighbouring marine store. He added little to the Museum except a valuable microscopical collection, but he drew up a catalogue of the fossil organic remains of plants. He was, as his portrait indicates, a jovial man. He retired on account of ill health, and when he died at Pangbourne in 1861 he left a penniless and, alas, unpensioned widow.

And he was followed by Flower, a strong organizer and a born manager of men, whose graceful figure and handsome face many of us can remember. Under his peaceful rule dissensions ceased. He was, to begin with, assistant surgeon at the Middlesex Hospital, and served as surgeon in the Crimean war. He was appointed conservator in 1861 and stayed until 1884, when he succeeded Owen in charge of Waterhouse's terra-cotta palace at South Kensington. He developed into a pure comparative anatomist and specialized in bones, and especially human bones. He amplified and enlarged Hunter's osteological collection, and has left in it a memorial to his industry and skill to which I shall refer later.

A word of explanation with regard to the natural history collection must here be introduced.

There were no natural history museums in London before Hunter's time. But the British Museum in its earlier days began to make such a collection. In 1809 they wanted to get rid of these specimens, and sold them to us for £180, but in 1814 they found they had made a mistake, and so we sold them back again but by good fortune retained the Evelyn plates of vessels and nerves, made in 1642 by a professor in Padua under Evelyn's direction, and given by him to the Royal Society, and by them to the British Museum. Dr. Keith has had them properly mounted, and they now have a prominent place allotted to them.

Hunter had a good many stuffed animals, but after obtaining a Royal Warrant, which is required before any of his specimens can be disposed of, they were sold or otherwise got rid of in 1829, 1834, 1843, and 1876;

including, alas! those collected by Captain Cook. It must be remembered that at one time we used to fit out exploring expeditions such as those of Captain Everard Home, Banks, Beechey, Franklin, Ross, Parry, and Darwin, with bottles and apparatus, and have now in our possession many of the specimens which they brought home.

When Flower left in 1884 he was succeeded by the amiable, retiring, laborious Stewart. Being a man of artistic temperament, he was attracted by such subjects as mimicry, symbiosis, and protective colouring. He was at first a teacher of physiology at St. Thomas's Hospital, but after his appointment here worked as a comparative anatomist. He extended Owen's rearrangement of the Physiological Series, which was not quite on Hunter's lines, as they both took rather the mechanical view as opposed to the physiological. A consummate draughtsman and a clear exponent, he made many discoveries which he was too indolent (may I say?) to publish, but they remain on the stands as silent but eloquent witnesses of his work.

And now I should tell Mr. Hunter that the mantle has fallen upon a thoroughbred compatriot of his own, and should feel confident that between them there would be illustrated the *action of the principle of universal sympathy*, except, perhaps, that there might be some incongruity between the northern accent of the one and that which used to be current in the neighbourhood of Long Calderwood. It would be necessary to add that under Dr. Keith's guidance, with the able assistance of the curators, Mr. Shattock and Mr. Byrne, we are trying our best to keep Hunter's spirit in view in all the changes which have been lately made and are still in prospect, and that "Body, Blood, and Motion," is our motto, and that to illustrate the processes of life is our leading idea.

These are the conservators, but it would be wrong not to mention some of the illustrious workers who, without holding that office, devoted much time and labour—often a labour of love—to the Museum. Pre-eminent amongst them is Sir James Paget, who examined and elucidated so thoroughly, and wrote so much of the descriptive part of the catalogue; and besides his there are the names of Stanley, of Goodhart, and Doran and Eve, and men like Elliot Smith, who have added complete chapters to its story.

Growth of the Museum.

Some idea of the way in which the Museum has grown may be gathered by remembering that no part of the original building remains. The room which was first erected in 1800 and completed in 1813, just a century ago, partly on the site of houses belonging to the College, partly on that of the old theatre in Portugal Street, occupied a position in the middle of the three existing galleries, and this was large enough to contain all the 13,682 of Hunter's specimens, including some which, as I said, have disappeared, as is shown by a very indifferent sketch, apparently of Clift's, in which the head of a giraffe, no doubt the one which in 1834 went with the other stuffed animals to the British Museum, appears looking out of the museum through the gallery into the Cabinet Room, whatever that may have been.

The Museum is now more than three times the original size, and contains 64,766 mounted specimens, and there are besides still unexplored stores to which constant additions are being made.

Some people may wonder why we try to keep adding to our invested funds. I say nothing about the uncertainty of riches, though that is perhaps more obvious now than when the phrase was coined. But I should like to point out that the Museum will continue to grow, and that we may some day wish to enlarge it, which would involve three things: Diminution in income from rents, loss of interest on capital expended, and increase in expenditure for upkeep.

The Museum now consists of three long rooms, two of which are parallel with one another, and the third at right angles to these, both the first and the third being divided into two parts. Roughly speaking, the last contains the Physiological Series, while the two others are devoted to Anatomy and Pathology; but there are other rooms to which reference will be made, and scattered throughout are curiosities which have to find places where they can. Here a huge skeleton of a whale floats, like Mahomet's coffin, in mid air, and elsewhere are such unlikely objects as the clothes of a man stripped off by lightning, leaving him intact, or the initials—perhaps of two lovers—found on splitting a beech tree, healed over and buried beneath many annual rings.

A Tour of the Museum.

But it is really time to proceed with the proposed formidable inspection, and I would suppose that we begin by conducting Hunter through the door opening out of the Conservator's office into the smaller part of the eastern room, in the cases round the walls of which is the commencement of the series of comparative osteology.

He would gaze with astonishment at the group of vast fossil skeletons, and might possibly ask us what they had to do with his Museum—a question which might at first seem hard to answer. But the great black statue of Owen in the corner would remind us that in 1855 he gave some lectures in this theatre on Hunter's published and posthumous papers on fossils, and that he showed by many quotations that Hunter began to hold almost modern ideas about geology and palaeontology as early as 1761, when he was serving with the army in Portugal. The story of Noah's deluge had not satisfied Leonardo da Vinci and Fracastoro in the fifteenth century, but it still hampered the thoughts of scientific men of the eighteenth century. It was therefore remarkable that Hunter was able to emancipate himself so completely and, to quote from Owen, to recognize "first, the effects of running water as in valleys and river courses; secondly, the deposition of the matters so transported to the sea, noting the different distances to which such transported matters would be spread over the sea bottom, according to their size and other physical characteristics; thirdly, the erosive action of the sea on coasts, as moved by tides, currents, and winds; fourthly, the power and mode of operation of a retiring sea on a rising land; fifthly, igneous expansive force and volcanic eruptions; and sixthly, deposits through animal or organic agency."

This includes almost every agency of geological dynamics recognized at the present day, except that of ice, and was arrived at "by supposing from the state of the earth as it is now what must have taken place formerly." From this standpoint Hunter seemed to have an inkling of the origin of species and the gradual evolution of life, and was able to contemplate in some measure the antiquity of man. Thus, it is fitting that (presided over by Owen) these horrid monsters should guard the portals of our Museum, and that Hunter's 2,773 fossils should be lodged, with his invertebrate specimens, in a special place of honour.

So we should turn to the left and tell him that the crowd of vertebrate skeletons in the next room, among which he would recognize many of his own favourite preparations, should really be in the cases along the walls, only unfortunately they are too large. These cases contain the continuation of the comparative osteology series. In passing we should point out Flower's magnificent preparations illustrating the evolution of the individual mammalian bones. On our way up to the galleries it would be explained that leading out of them are the new rooms added last year, containing a collection of surgical instruments, the embryo of a medico-legal collection, his own invertebrate collection, and the fossils to which I have just referred. And then in the galleries he would find his own physiological series amplified and enlarged. We should show them with confidence, tempered by the fear that he might impatiently resent certain modifications of order and arrangement, though he could not fail to recognize that the *idea* had been grasped. We should point out that the physiological series still illustrates processes rather than isolated facts, and is, therefore, drawn from the whole range of comparative anatomy. Thus, taking as an example the heading "Kidney," he would find specimens from 133 animals other than man, no less than 71 out of the total 144 being his own; and that the same thing is carried out under the other headings.

In order to grasp the plan on which the whole museum is arranged it would then be best to visit the ground floor of the eastern rooms. Beginning with the cases on the walls, we should find illustrations of normal (and, it must be owned, some abnormal) varieties of humanity, amongst

which Byrne, the Irish giant, would be a familiar object. There are skeletons of dwarfs, of average men and women, and of geniuses and of criminals; and then we should start on the splendid collection of skulls illustrating ancient and modern types and examples of those of all the races under the sun, present and extinct. This fills up both sections of the room and a considerable part of the middle room.

The floor of the eastern rooms is devoted to specimens illustrating human anatomy. First, the collection of disarticulated bones in progressive series, showing their development from early fetal life to maturity; and then dissections, which are said to be unequalled, mostly made by the skilful hands of Mr. Pearson, who has been prosector here for fifty-six years.

The Pathological Section.

And now there would be left only the pathological section, to which it would be my duty and my pleasure to especially invite the attention of my guest, as I now do that of my audience.

Hunter's catalogue of this part of his collection was left in considerable confusion, but it is clear that his idea was to divide it into two main groups, one illustrating processes of general pathology, the other the various morbid processes affecting particular organs. This has long been before the minds of those who have had charge of the Museum. But it is only during the last year that the Council has made arrangements for a full display of specimens illustrating general pathology.

The floor space of the central room has been cleared in a way it is needless to describe, and if it were only possible to find a better home for the suspended skeleton of the whale, uninterrupted daylight would illuminate groups of glass and gun-metal stands so arranged that they can be observed from all sides, labelled and supplied with handy card catalogues, and following one another group by group in the following order:

1. Hypertrophy.
2. Aplasia.
3. Hypoplasia.
4. Atrophy.
5. Degeneration.
6. Necrosis.
7. Repair and grafting.
8. Inflammation.
9. Infective diseases:
   Bacterial: Glanders, Acute Endocarditis, Diphtheria, Tubercle, Leprosy, Actinomycosis.
   Protozoal: Syphilis, Tropical Diseases, etc.
10. Cysts.
11. Tumours.
12. Foreign bodies.

I have placed upon the table a few Hunterian specimens in order to show that it has not only been possible but highly advantageous to use them for this purpose. You will observe what remarkably fine preparations they are.

1. A ringed stem to illustrate	...	Hypertrophy.
2. An edentulous jaw to illustrate	...	Atrophy.
3. Atheroma of the aorta to illustrate		Degeneration.
4. Experimental necrosis on the metatarsal bone of an ass to illustrate		Necrosis.
5. A hare-lip cured 6. A fractured clavicle	to illustrate	Repair.
7. A cock's spur implanted in the comb to illustrate	... ...	Grafting.
8. Myositis ossificans 9. Necrosis of skull following a scalp wound	to illustrate	Inflammation.
10. Tubercle in the lung of an ox 11. Specific necrosis of the skull	to illustrate	Infective diseases.
12. Gas cysts in a hog's gut	to illustrate	Cysts.
13. Secondary sarcoma of rib to illustrate		Tumours.
14. Gunshot injury of humerus of swan to illustrate		Foreign bodies.

It would have been impossible in Hunter's time to make so complete a list as this because the great group of infective diseases would have been simple and unanalysed. If he had possessed a knowledge of bacteriology it would have saved him a vast amount of fruitless speculation, or at all events speculation which now seems to be disappointingly beside the mark. I think he would have lingered long over this department, for I hope it has been made clear that what has just been said is intended to be the kernel of my address: that this exhibition of illustrations of general pathology though a new departure, is Hunter's idea, and that it is not only new but good and, as far as I know, unique. I would, therefore, urge my hearers to visit and study it and judge for themselves of its utility and interest and of the skill of those who have brought it together.

The tour of the Museum would be completed by visiting the galleries of the central and eastern blocks, where the specimens are arranged according to the organs affected. In ascending to them it would be pointed out that a staircase descends to the basement in which is housed our unequalled odontological collection, where amongst the specimens which came to us from the Odontological Society are Hunter's own classical preparations.

And now I should bid my guest adieu, feeling, if not saying, that while in his writings there may be some things hard to be understood, here in our Museum is recorded in unmistakable language the record of thoughts and ideas that it is impossible to misapprehend.

Suggested Anatomical and Pathological Institute.

Thus, in an imperfect way, I have tried to show what the Royal College of Surgeons has done, and hinted at the certainty that some day the Museum will have to be enlarged. Now let me put before you a vision of the future. Ought not this great city to have an Anatomical and Pathological Institute? Our university has again, by collision, passed into the nebulous state, and we know not in what form, nor, indeed, in what orbit or orbits it may finally revolve. It may be anticipated with confidence that it will emerge as a life-supporting globe or double star with a more equable temperature than at the present moment. Money is to be had for proper asking, and a site is generally obtainable when it is required. Can you not see such a noble institute close at hand, forming a part of a really living university, and also in close connexion with our College, attracting workers from all over the world, to utilize the vast material the Museum contains? It would strengthen the feeble bonds which at present unite us to the university, and supply a long-felt want of the medical faculty. It would offer opportunities for original research in human and comparative anatomy and in pathology; and in its theatre lectures on advanced subjects would be delivered *urbi et orbi*.

Recently Deceased Members of the Council.

The terms of the bequest under which these orations are given instruct the speaker that "such oration should be expressive of the merits in Comparative Anatomy, Physiology, and Surgery, not only of John Hunter, but also of all such persons, as should be from time to time deceased, whose labours have contributed to the improvement or extension of Surgical Science."

This would be an impossible task, for the whole world is apparently included in the purview; but according to custom, and by inclination, I must say a few words about two friends and colleagues on the Council whose vacant places we must deplore.

Clinton Thomas Dent, an all-round original and successful surgeon at Hunter's own hospital, was Vice-President at the time of his unexpected death last summer. He had no specialism in medicine, and he will rather be remembered by his numerous friends for his many-sided character, multifarious attainments, and sterling worth than for striking additions to surgical practice or literature, and yet his contributions to them were neither few nor unimportant.

Sir Henry Trentham Butlin, my immediate predecessor, on the other hand, was well known as a surgical pathologist, whose chief labours were devoted to the treatment of, and the elucidation of the cause of, cancer, a subject to which it may be said he devoted his last breath. Those who can recall this day four years ago, when his oration was delivered in perfect English and without a note, will agree that he was a finished orator. We on the Council knew him as an admirable man of business, who wisely conducted the affairs of this College, as a man of the highest integrity, a pleasant companion, and a faithful friend.

Comparison of Lister and Hunter.

But beyond and above all the other leaders, or men in the ranks, who have passed away during the last two years, is Lister, who by common consent is the greatest—that is, the most thoughtful and original—surgeon since Hunter's time, one who more than any of his predecessors

was influential in revolutionizing both the science and the art of surgery. It is not the occasion to enter upon a survey of Lister's work, but it may be interesting to consider the influence that Hunter had upon him, and briefly to compare the two men.

The first time I heard the name of John Hunter was in my youth during one of Lister's vacations, which he often spent at his father's house. The subject he was describing is forgotten, but the name impressed itself upon my young memory, and many a time in after-years have we, who were closely associated with him, heard this name recalled with reverence and admiration. Occupying a prominent place in his study was Sharp's engraving, bequeathed to him by Mr. Syme, and now my treasured possession, as is also the edition of Palmer's *Life*, which is marked in many places. These passages show that Lister was studying this book at the time he was making his early observations on coagulation of the blood. Indeed, a precise date may be fixed by a pencil note to the account of "a gentleman with violent inflammation in one of his eyes and whose blood was extremely sizy, though the coagulum was very loose." The note is, "No excess of fibrin in this buffed blood apparently. J. L. /58." Other remarks are opposite references to inflammatory fever; the principles of bleeding, and especially their possible dependence upon continuous sympathy; and local diseases cured by sympathy, as by the application of an irritating medicine applied to some other part which this diseased part sympathizes with. There are several in the lecture on aneurysm; indeed, there are exclamation marks opposite some references to hydrostatics. And similar annotations are met with in the lecture on fistula and elsewhere.

It might be wondered what were the points of attraction between men in many ways so different. Certainly Lister possessed none of Hunter's mania for collecting. He had, indeed, what he called his museum, one or two bread-pans containing specimens, no doubt of great value, and familiar to the succeeding generations of attenders at his lectures. But his shelves and cupboards were filled with more transitory things—flasks and test tubes, and the materials for experiment. Lister bought no costly works of art, and was content with early or late Victorian furniture; and though he often adopted Hunter's generous but confusing method of leaving the amount of the fee to the patient's decision, he did not spend the proceeds in the same reckless way.

The points in Hunter's methods which Lister seemed most to admire and adopt were, first, that he appears to have taken nothing for granted. No matter how revered the teacher, how sacred the tradition, Hunter and Lister both asked themselves whether the evidence was sufficient to support the theory or warrant the treatment. Perhaps they would not have liked to be called sceptics, but in scientific matters they were, and it is the only safe position for a scientific man to adopt, though it may not indicate the path of worldly wisdom to the practitioner.

Illustrations might be given in Hunter's operation for aneurysm, or his observations on fistula in ano, or in Lister's amputation of the thigh, his excision of the wrist, or his methods of treatment of varicose veins or hydrocele. But there is no need to multiply examples. The whole story of Lister's discoveries and of the modifications in ordinary surgical practice which he introduced testifies to the truth of this assertion.

But, secondly, the most striking resemblance between them is their habit of referring everything to experiment. Their lives were occupied in testing by means of experiment every problem that presented itself. They were, indeed, both of them, ideal inductive philosophers.

It seems in some quarters to be considered that an inductive philosopher is debarred from framing for himself hypotheses, but this I conceive is not the case. Did not Bacon himself say, "Vaga experimentia mera palpatio est"? Such an idea would seem to imply that the followers of that great thinker experiment at large, and only accept the results of those promiscuous excursions. The difference, however, between them and the deductive philosophers is that the latter found their creed on deduction from unverified postulates, whereas the former require proof of the correctness of the premisses before they complete the syllogism. No great Baconian can get on without hypotheses, but he is ready to reject those that are not supported by his experiments. Are not Pasteur and Darwin proofs of the truth of this statement?

There is an interesting appreciation of Hunter's character in Buckle's *History of Civilization in England*. Buckle is almost labouring the point that the trend of thought in Scotland in the eighteenth century was deductive and that in England inductive, and is arguing that Hunter was a sort of hybrid.

When John Hunter arrived in London, in 1748, Newton had been dead more than twenty years, and the English people, absorbed in practical pursuits, and now beginning, for the first time, to enter into political life, had become more averse than ever to inquiries which aimed at truth without regard to utility, and had accustomed themselves to value science chiefly for the sake of the direct and tangible benefit which they might hope to derive from it.

That Hunter must have been influenced by these circumstances will be obvious to whoever considers how impossible it is for any single mind to escape from the pressure of contemporary opinion. But, inasmuch as all his early associations had inclined him in another direction, we perceive that, during his long residence in England, he was acted on by two conflicting forces. The country of his birth made him deductive; the country of his adoption made him inductive. As a Scotchman, he preferred reasoning from general principles to particular facts; as an inhabitant of England, he became inured to the opposite plan of reasoning from particular facts to general principles.

It is rash to differ from so great an authority, but, as a matter of fact, did Hunter really get his mind down on methods of reasoning and such abstruse questions during his idle youth at Long Calderwood, when he cared much more for country sports than for books, or whilst helping his convivial brother-in-law, Buchanan, in his carpenter's or wheelwright's shop? Did he even acquire from his surroundings or by inheritance any method of ratiocination? I think not. And if Scottish influence had anything to do with the formation of his mind it must have come from his brother William. But, in reading much of his writings and in trying to assimilate the spirit in which the Museum was planned, I feel that Buckle has overstated his case, and that Hunter was essentially an inductive philosopher.

And so was Lister. His whole life was made up of experiments. Any time that could be filched from practice or unavoidable public and private duties was spent in his study, investigating for himself such subjects as the coagulability of the blood, the growth of micro-organisms, the properties of antiseptic substances, blood pressure, and so forth, and it is interesting to notice how he called in aid for the solution of his special problems a well-grounded knowledge of botany, zoology, chemistry, and physics, subjects of which it is becoming too much the habit nowadays to minimize the importance.

But there are fundamental differences between them, of which the most important (to speak with all respect) is that Hunter's work is the more diffuse. He seems to fly from one subject to another, as if he were unable to resist the temptation to investigate everything that came in his way. It is as though what has been referred to above as the spirit of the collector inspired his more serious work, and so he has left a record of an almost incredible number of problems either completely or partially elucidated.

Lister, on the other hand, did not yield to this temptation if he felt it. Starting on the narrow path upon which Providence had placed him, he followed it till it broadened and straightened out into the great highway that led him to his goal. Not that he denied himself the pleasure of occasional explorations of tempting by-paths, but what he gained from these excursions was always utilized to corroborate and support him upon his journey. And thus it comes about that Lister's fame rests chiefly upon the one great achievement of his life, whilst the lesser and more subsidiary ones are by many forgotten or ascribed to others; whereas it is difficult to mention one or even a few of Hunter's labours which stand out in glaring predominance above the rest.

Of less importance, but equally striking, are the differences between them in temperament, culture, and manners. Hunter was imperfectly grounded in general education, a small reader, abrupt, not to say rough, in his conversation, which was flavoured with a full share of the impetuous vocabulary of the eighteenth century. Though generous, he was impatient; though on the whole a good

friend, he was somewhat inconstant; and his mind was so fully occupied with his work that more solemn subjects had no chance of consideration.

Lister's mind was well stocked with classical and other learning, and his library was lined with carefully studied books. He was gentle and courteous, and though full of humour he could not abide even those relics of coarseness which survived in "polite conversation" in the nineteenth century. He was always ready to make allowance for the incompetence of those who did their best; he made no enemies, and his position as regards more serious matters was a very different one from that of his great predecessor.

Both, however, were fond of argument, and neither in the course of it could easily brook opposition. Verily it is a matter of thankfulness that they lived at different epochs. It is well that Lister was able to contemplate Hunter's many great qualities and his few obvious defects through the modifying mists of the intervening years.

Closing Remarks.

I have spent the last year in an atmosphere premeated by the spirit of John Hunter; I have had the privilege of passing the best years of my life in the closest intimacy with Lister, and I often ask myself in what way a genius surpasses the average man. After a day passed in the company of such a one, and after meditating on any particular thing that he did, the ordinary man might fancy that there was nothing in it he could not have done equally well himself; and yet the life's performance is so different! The individual touches of the brush might conceivably be made by anyone, but only the artist can produce the picture. That, of course, depends upon the master mind which co-ordinates the details, making them minister to the result. We cannot attain to that, and it is the consciousness of this superiority of the great that makes the position of ambitious mediocrity so painful. But though we cannot reach to the height of Lister or of Hunter we may make our lives more useful by imitating their extreme diligence, their accuracy, and their habit of finishing whatever they were engaged upon before turning to the next matter; by not shirking the long days of labour and nights devoid of ease, or spending too much of our time on pleasures and indulgences.

The problem of life to Hunter was the still unsolved riddle of its meaning and of its origin. Lister was content with the belief that at the present day there is no spontaneous generation. Had he doubted the truth of this doctrine he might possibly have had misgivings as to the truth of the gospel that he preached. Fortunately he did not doubt, for he was a man of firm convictions.

But after all, whether chemical changes are now and always converting dead inorganic substances into living protoplasm is, for practical men, no more important than the more abstruse question as to whether matter is composed of atoms or vibrations. Life for us has another meaning; whilst the blood is moving in our bodies, as John Hunter said, we have life, and the problem for us, taking him for an example, is not simply to keep alive, but to live well.

> Nicht dass man lebe, sondern wie,
> Ist Mannes würd'ges Streben;
> So lang mir Leben Gott verlieh,
> Will ich's lebendig leben.

THE De Dion Bouton (1912) Company will send in response to applications addressed to 10, Great Marlborough Street, London, a pamphlet giving "owners' opinions" of their 14, 15, 18, 24, 25, 26, and 30-h.p. cars.

VEDDER, in an interesting article on the etiology of beriberi (*The Philippine Journal of Tropical Medicine*, vol. vii, Sec. B, No. 4, 1912), states that the administration of large amounts of alcohol has not produced neuritis in fowls. Fowls develop polyneuritis when fed on a diet containing a sufficiency of all the alimentary principles, providing no one of the ingredients of this diet contains the neuritis-preventing substance. This neuritis-preventing substance is not volatile, but is destroyed by heat. It is not an inorganic salt, and probably not an alkaloid. Since it has been shown that this substance is not a fat, protein, inorganic salt, or alkaloid, it seems probable that it is an organic base, as claimed by Funk, but Vedder so far has been unable to confirm this.

ACHES AND PAINS CONNECTED WITH THE EYE AND NOSE.*

By CECIL E. SHAW, M.A., M.D., M.Ch.,
LECTURER ON OPHTHALMOLOGY AND OTOLOGY IN QUEEN'S UNIVERSITY, BELFAST.

In a society accustomed to listen to deeply scientific papers, some apology seems necessary for bringing forward such a commonplace subject as aches and pains. My excuse is that after twenty-five years of work at the eye, it is more profitable to give the result of experience, and leave original scientific theories to younger men. Besides, commonplace though my subject is, it is one of great importance, for such pains not only call aloud for relief, but in many cases their exact location and character may give us valuable help in diagnosis.

I do not know of any natural classification of pains, so shall first consider the more acute pains, and then the chronic aches, and especially headache.

1. *Pain in the eye itself*, increased by every movement and accompanied by redness and watering, is often due to a foreign body in the eye, even though the patient is not aware of having got such. The commonest place of lodgement is under the upper lid, which must be everted to see it, or on the cornea. If the particle is a small piece of grit in the cornea it may not be visible except by focussing a strong beam of light from a lamp or candle sideways on the eye with a lens.

2. *Sharp neuralgic pain*, coming on every night for weeks or months and hindering sleep, is not uncommon. It is not only in the eye, but around it, and shoots over the top of the head and down the side of the nose, and may affect one or both eyes. Such pain points to chronic iritis, and is important to recognize if vision is to be saved. It is often mistaken for neuralgia, but in the latter there are the typical tender points, while in iritis there is generally to be seen, on careful inspection, a slight pink blush in the sclerotic round the cornea—that is, ciliary injection, which points to deep-seated disease of the eye. In many cases the eye is tender on pressure over the closed lids. The pupil is fixed, and often partly blocked with lymph, and vision is more or less affected. Such cases often occur in apparently healthy young adults as the result of syphilitic infection.

3. *Acute Iritis.*—A somewhat similar, but often more severe pain, coming on with marked signs of irritation—injection, photophobia, and lacrymation—and a dull muddy look in the iris, with contracted pupil and little or no loss of vision, indicates acute iritis, commonest in young adults. It is easily mistaken for simple catarrhal conjunctivitis, in which there may be similar signs of irritation, but the diagnosis is made by observing that the pain is worse in iritis, and is not confined to the eyeball, and also in iritis the pupil is sluggish or immovable. Further, in conjunctivitis there soon appears a sticky secretion, which is absent in iritis.

4. *Acute Glaucoma.*—The same acute pain and irritation, coming on suddenly in a person over 50, with dilated pupil and great loss of vision, indicates acute glaucoma. In this case the pain is proportionate to the vascular disturbance, and may be agonizing and accompanied by vomiting. The loss of vision is far greater than in iritis; in very acute cases even perception of light may be lost in a few hours. The condition is not, properly speaking, an inflammatory one, but is congestive like strangulated hernia, and unless quickly relieved it leads to permanent loss of sight.

5. *Gout* in the eye is not common, but it is well to remember that it may occur, and be very alarming. It comes on suddenly at night with great pain in the eyeball, which is acutely congested and irritable; but the pupil is clear and moves freely, and vision is not affected. The pain may pass off in a few hours and the other symptoms soon go, but the attack may soon return, or may be succeeded by typical gout in the toe.

6. *Sphenoidal Sinusitis.*—A very severe bursting pain, generally described as in the middle of the head, but sometimes shooting up to the ears, with marked constitutional symptoms, is caused by suppuration in the sphenoidal sinus, and less severe but still marked neuralgic pains

* Read before the Ulster Branch of the British Medical Association.

arise from acute conditions in the other sinuses—probably accidental blocking of discharge in a chronic inflammation of the sinus, as they are often relieved by painting or spraying with adrenalin. Suspicion should be directed to the nasal sinuses by the fact that there is commonly a history of severe influenza recently, or of long-standing nasal trouble, with crusts of dried pus in the nostrils, and perhaps an offensive smell. Pus from the sphenoidal sinus finds its way into the pharynx and not into the nostrils, but it is seldom that one sinus alone is affected, and there is pretty sure to be suppuration in some of the other sinuses—ethmoidal, frontal or maxillary—discharging into the nostrils. Acute symptoms are, however, comparatively rare in these cases, and chronic headache, to be discussed presently, is far more frequent.

7. *Malignant Disease.*—Constant or frequently recurring pains, rather vaguely localized about the back of the nose and shooting up into one or both ears, especially if occurring in an elderly person, call for careful examination, as they may be due to malignant disease. In some such cases pain is an early and prominent symptom, but on the other hand it may be entirely absent. I have seen a case of carcinoma in the posterior wall of the naso-pharynx, spreading its roots, apparently, in the bodies of the cervical vertebrae, and running to a fatal termination, quite painless from first to last.

Headache.

Coming now to some forms of headache, there are two due to nasal disease which often escape detection for long periods.

8. Hypertrophy or cystic enlargement of the middle turbinated bones is, I believe, a fairly frequent cause of headache in young adults. This hypertrophy is different from the hypertrophy of the inferior turbinateds seen in children and young people associated with adenoids. The headache may be a dull frontal one, with a feeling of weight or tension about the bridge of the nose, and sometimes a little redness of the skin there also. It comes on in the afternoon, and is made worse by heat and damp. I have more than once heard from country patients sad complaints of their inability to enjoy the social attractions of a "swarry" owing to the headache brought on by the atmosphere of the hot and crowded room. In such cases, if one paints the inferior turbinated bones with a little cocaine and adrenalin to cause the mucous membrane to shrink, one will see the middle turbinated bones, large, rounded, and smooth, pressing against the septum.

9. Chronic suppuration in the accessory sinuses is, as mentioned above, a frequent cause of headache. In some at least of these cases the headache is not due to the direct local influence of the diseased tissue, but to the circulation of toxins in the blood. My reason for this belief is that in cases of chronic sinus disease which have run on for years without treatment, one sees that the skin is a very unhealthy colour—a dirty yellow. After a few weeks of treatment, during which the pus has been washed away instead of being swallowed, the change may be most striking; the skin becomes clear and rosy, and at the same time the headache disappears. Sinus disease most frequently arises from influenza, except in the maxillary sinus, where it often arises from the teeth. If the maxillary, frontal, or anterior ethmoidal sinuses are affected, the pus will appear in the nostrils, which will be filled with dirty yellow crusts very hard to get rid of; if the posterior ethmoidal or sphenoidal sinuses are affected the pus will drain into the naso-pharynx, where it is seen in sticky yellow strings or dry flakes.

10. The severe and continuous headache which is caused by tumours, gummata, etc., in the brain has no direct connexion with the eyes, except that the occurrence of such severe headache calls for careful examination of the optic discs. If the sharp outline of either disc is blurred and its vessels overfull, it is probably due to a beginning papillitis, and is strong evidence that the headache is due to a new growth. Papillitis occurs in about 90 per cent. of brain tumours, both it and the headache being due to increased intracranial pressure.

11. The last ache which I wish to notice is the headache arising from errors of refraction, especially from astigmatism; and this, in my experience, is far the commonest cause of headache. In 1,000 consecutive eye cases in my private practice, I find that 45 per cent. came on account of some inflammation, degeneration, or injury of the eye, while 55 per cent. came on account of errors of refraction, 40 per cent. astigmatism, 10 per cent. hypermetropia or presbyopia, and 5 per cent. myopia. This may seem a high percentage of astigmatism, but it is to be remembered that where the error is a simple spherical one it is often passably corrected by glasses picked up at an optician's, whereas astigmatism calls more loudly for thorough examination and treatment.

Astigmatism.

Almost every case of astigmatism suffers from headache, not generally very severe—and, indeed, it has been said that the more severe a headache is the less likely it is to be due to the eyes. But headache due to eyestrain is very constant and wearing, often coming on at the same hour daily for months without intermission, except perhaps on Sundays and holidays, when the strain is less; and such intermissions should always direct attention to the eyes. In other cases headache only comes on when something has affected the general health to some degree. As Dr. Berry of Edinburgh says, overexertion of the eyes when the nervous system is below par is far the commonest cause of ocular headache.

It is to be noted that it is specially the low and not the high degrees of astigmatism which give rise to headache; this is probably owing to an involuntary but very tiring effort of the ciliary muscle to correct the slight astigmatism by irregular contraction. Such low degrees of astigmatism are compatible with fairly good sight, so often pass undetected when vision is only roughly tested. One sign may be noted as hinting at astigmatism, and that is that the patient reads several of the smaller lines of test type incorrectly. With hypermetropia or myopia it is common to see a patient read down to a certain line, say $\frac{6}{12}$, correctly, then stick. But with a slight degree of astigmatism he may read $\frac{6}{12}$, $\frac{6}{9}$, and $\frac{6}{6}$ all incorrectly, making mistakes in every line. If asked about his sight he says it is excellent, and is quite surprised to find that it can be improved. Some years ago one of our champion golfers came to me saying that he thought he needed glasses for office work. He had slight astigmatism, but said that he had splendid sight for distance, and was very sceptical when told that glasses would help him even out of doors. However, he agreed to try them, and shortly afterwards told me that he could follow the flight of a golf-ball as he had never done in his life before.

Not every astigmatic person needs to wear glasses constantly, and often they are only necessary for reading, writing, and other near work. But where headache is troublesome it may be necessary to wear the glasses all the time; and this brings me to a point I wish specially to emphasize, which is that the correction of errors of refraction is not a mere mechanical affair, and should not be entrusted to the optician. The patient's age, occupation and state of health, and the difference between the two eyes, if any, have all to be considered. Last month, for instance, I saw a girl who is at a boarding-school in a country town in Ulster. Her sight was poor and she needed glasses, but on inquiry I found that she was working nine and a half hours daily, and that on very Spartan fare! It was necessary not only to attend to her eyes, but also to open her mother's eyes to a sense of the situation.

If time permitted I might discuss many other aches and pains, but I have discussed only the more frequent and important, in the hope that these notes will give a basis of discussion to the experienced, and possibly may be of some help to the beginner.

THE net personalty of the estate of the late Dr. C. Theodore Williams has been sworn at £118,798.

THE firm of E. Leitz (18, Bloomsbury Square, London) have recently issued a guide to photomicrography primarily prepared for users of apparatus made by the firm, but discussing also general principles. Among the subjects dealt with are the selection of a place for setting up the apparatus, the mode of photographing solid objects, and the method of obtaining stereoscopic photographs. Photographic details are well discussed, as are also the preparation of lantern slides and cinematograph pictures. The firm has also issued a pamphlet giving directions for the use of the large metallurgic microscope with camera for the study of metals.

TUMOURS OF THE ORBIT: A PLEA FOR OPERATION.

BY SIR WILLIAM COLLINS, M.S., M.D., B.Sc.LOND., F.R.C.S.ENG.,

SENIOR SURGEON TO THE ROYAL EYE HOSPITAL, LONDON.

THE orbit is territory upon which the ophthalmologist and the general surgeon meet. Growths in that region may be held to fall within the sphere of activity of both, and are sometimes renounced by the one in favour of the other. Their pathology and classification are not thoroughly elucidated, and their treatment is often, I think, not too satisfactory. I am not alluding to simple tumours such as exostoses or dermoid cysts, which are not infrequent in this region, but to vascular and malignant growths, which, though relatively rare, are not so uncommon as some writers would have us believe; nor, in my experience, is the outlook, if treated by operation, so gloomy as the statistics vouchsafed by some authorities would seem to imply.

To illustrate my meaning I will cite the following cases on which I have operated, several of whom had been previously advised that the risks of the operation itself were so great or the liability to early recurrence so considerable that surgical intervention was discouraged, or even strongly discountenanced.

CASE I.

Mrs. B., aged 65, admitted to a private ward in the Royal Eye Hospital on September 26th, 1910. There is a small hard nodular swelling about as big as a filbert to be felt at the orbital margin of the left malar bone. It is firmly planted and feels as if it were continuous with further growth which the finger detects on firm pressure between the bone and the globe. The swelling was first noticed six months ago, and of late has been increasing in size. The eye is displaced upwards and inwards and there is diplopia, most marked when looking down and to the left. There is no pain. Breathing through each naris is normal, but the left antrum appears to be more opaque than the right on transillumination. The finger detects no swelling in the naso-pharynx and the maxilla does not seem distended or enlarged. Vision, right eye $\frac{6}{9}$, left eye $\frac{6}{9}$ c +1.75 D. Fundi normal except that the left optic disc is somewhat redder than the right. Pupils equal and react normally. There is some ulceration of the septum nasi on either side, but there has been no epistaxis. There is a systolic aortic bruit, and there is evidence of osteo-arthritis in the interphalangeal joints. Urine: Specific gravity 1018, acid, no albumen or sugar. Operation had been disadvised. On September 28th, in the presence of her medical attendant (Dr. Salt), the patient was placed under chloroform, and Sir William Collins made an incision through the lower eyelid exposing the tumour, which had the appearance of a periosteal sarcoma. The eye was excised, the growth freely removed by the elevator, scissors and forceps; and all the soft contents of the orbit were carefully cut away. The orbital plate of the superior maxillary bone and the orbital surface of the malar, whence the growth sprouted, were scraped clean. Zinc chloride and opium paste spread on strips of lint was then packed lightly into the orbit in apposition to the bony surfaces but not so as to come into contact with the eyelids, which were spared. The incision in the lower eyelid was sutured. The skin was smeared with eucalyptus vaseline. The patient bore the operation well, and convalescence was uninterrupted. The $ZnCl_2$ strips were removed on the evening of the second day leaving a desiccated bony surface all round. The patient left the hospital on October 10th.

P.S.—I had satisfactory reports of the patient during 1911 from Dr. Salt, and in June, 1912, I saw her. The orbit is perfectly healthy and there is not the slightest evidence of any recurrence. Some of the ethmoid cells are exposed at the upper and inner part of the orbit, but they give no trouble.

In June, 1912, I again saw this patient. She was in excellent health and perfectly free from any recurrence.

CASE II.

Mary M., aged 32, married, one child 3 months old. Father and mother alive and well, and four brothers and one sister also in good health. Patient has old hip disease, left, and wears a high boot. No history of phthisis.

Seven years ago she was a patient at the London Hospital for a tumour on the outer part of the right upper eyelid, which was removed. There has, however, always been some swelling in the same spot.

On July 27th, 1907, she was admitted into the London Temperance hospital under Sir William Collins with an irregular, prominent, tense, elastic, well defined, painless swelling at the upper and outer margin of the right orbit, as large as a walnut. It is firmly fixed to the bone, and the skin glides freely over it. The globe moves normally and is not displaced by the swelling. There is some ptosis. The vision of each eye is $\frac{6}{9}$ and J.1.

On July 29th, 1907, under $CHCl_3$, Sir William Collins cut down in lacrymal region, and with elevator prized out the tumour, which was cystic in places. It healed quickly, and the patient went out on August 10th. Microscopically there was lacrymal glandular tissue, but in parts there was the appearance of sarcoma.

On December 29th, 1908, the patient was readmitted with a small tumour in the site of the old scar, which had appeared two months ago; it is painful on touch. The patient volunteered the statement that when she peels onions the left eye waters but the right does not, though it becomes red and smarts.

The swelling complained of is of the size of a pea, and appears to grow from the periosteum just interior to the right external angular process.

On January 7th, 1909, under $CHCl_3$, Sir William Collins dissected out the small growth. A section showed it to be sarcomatous.

The patient was readmitted on November 15th, 1910. There is now a good deal of exophthalmos of the right eye, which has come on during the last two months, and the vision of the eye has rapidly failed. Sir William Collins advised enucleation of the eye and growth, which he did under $CHCl_3$ on November 17th. The growth was freely cut away as it extended widely, and, after removal of the soft structures in the orbit, the cavity was lightly packed with zinc chloride and opium paste on strips of lint.

The next day there was some epistaxis, but otherwise convalescence was rapid, and the patient was discharged on December 10th. The pathologist reported: "The growth appears to be round-celled sarcoma."

On June 30th, 1912, some pain in the orbit was complained of, and there was some swelling. The patient was readmitted, and under $CHCl_3$ Sir William Collins removed all the cicatricial soft tissues in the orbit. Portions of the frontal and maxillary bones were cut away, and $ZnCl_2$ reapplied.

The patient was seen in November, 1912. She had gained in weight and was free from any local or other recurrence.

CASE III.

Mrs. W., aged 42, had for fourteen years had some proptosis of the right eye. This had commenced after the birth of the second of her three children. Prominent tortuous veins made their appearance at the inner canthus; the eye became more and more prominent until, when seen in 1905, it had become most unsightly and repulsive. The right globe was projected out almost on to the cheek, and a huge plexus of worm-like veins clustered around the inner canthus. She had sought advice, but one ophthalmic surgeon had told her it was too dangerous to operate on. The eyelids could not close—a bruit could be heard with the stethoscope over the orbital swelling. The vision was reduced to J.20 in the right eye; the fundus shows some enlargement of the veins of the optic disc. She had a large varix in the right thigh, and had suffered from haemorrhoids. Sir William Collins, under chloroform, tied the right common carotid in November, 1905, but this produced no marked effect on the swelling or proptosis. In December, 1905, Sir William, under chloroform, slit the outer canthus, excised the eyeball, and, separating the mass with his finger from the bony walls of the orbit, clamped and tied the vessels far back, and cut away the venous bunch with very little haemorrhage. The orbit was lightly packed with iodoform gauze, and healing was rapid and uninterrupted.

The growth proved to be a venous cavernous angioma, and contained some phleboliths.

The patient was seen this year (1912), and is quite well.

CASE IV.

A man aged 48 was seen by Sir William Collins at the Royal Eye Hospital in March, 1893, with a swelling, of three months' duration, below and to the inner side of the left globe, elastic to the touch, and displacing the eyeball up and out. There was increasing epiphora. Vision was not much affected, $\frac{6}{12}$ and J.1 with + 2.50 D. No history of syphilis. Under A.C.E. mixture Sir William excised the eye, and with the elevator prized away the growth and periosteum from the orbital walls. All soft tissues were cleared away, and zinc chloride and opium paste applied. Portions of the bones came away as sequestra. The growth was a round-celled sarcoma. Convalescence was uninterrupted. The patient attended as an out-patient for some long while afterwards, and showed no evidence of recurrence.

CASE V.

A man, aged 42, was a patient at the London Temperance Hospital, sent up by Dr. Lightfoot of Newcastle, with a history of "polypi" in the left nostril, and of a small growth having been removed from the left orbit, which was reported to be sarcomatous. The left naris was blocked, and the finger encountered growth in the naso-pharynx; the left eye was diverted, apparently by some swelling at the inner part of the orbit. No enlarged glands could be felt. Under $CHCl_3$ Sir William Collins divided the upper lip, opened up the nose, removed the greater part of the left maxilla, and cleared out the orbit. No soft parts were left between the roof of the orbit and the hard palate, nor between the septum nasi and the left malar bone. The ethmoid and sphenoid sinuses were scraped out, and zinc chloride and opium paste was applied to suspicious places. Convalescence was uninterrupted, and, when complete, the right Eustachian tube could be seen on looking through the left orbital cavity. He was readmitted some months later for removal of infected glands and for touching infected spots. A silver plate and a glass eye attached to spectacle frames covered up the gap left remarkably well. The growth was a rich spindle-celled sarcoma, both in the orbital

tumour and in the cervical glands. Ten months after the first operation he was reported to be well, gaining in weight, and without local or other recurrence. The following year, however, there was further return in the glands, and the patient died from exhaustion.

HAEMATOMA OF THE LEFT ORBIT TREATED BY MODIFIED KRÖNLEIN'S OPERATION.

BY

J. M. COTTERILL, M.B.,

EX-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH; CONSULTING SURGEON TO THE ROYAL INFIRMARY, EDINBURGH;

AND

GEORGE MACKAY, M.D., F.R.C.S.E.,

OPHTHALMIC SURGEON, ROYAL INFIRMARY, EDINBURGH.

ABOUT four years ago A. M., now aged 38, a blacksmith, was fitting a shoe to the left forefoot of a horse when the animal, suddenly turning its head, struck him with it on the left temple. He felt somewhat dazed at the time, and experienced a sensation of fullness about the left brow and side of the head, but as there was no discoloration nor external bruise and his sight was unaffected, he thought little about it. Some months later he began to notice that when he stooped forward at his work, or bent down to tie a shoelace, his left eye tended to come forward. It returned to its proper position on raising his head again. He did not take any advice about it until he found that the condition was becoming more pronounced, especially when he turned his head to the left while bending. In that attitude his sight became dim. He at length consulted Dr. Tod of Leith, who examined his eye, but could find no obvious explanation for his complaint.

On January 2nd, 1909, he went of his own accord to the Royal Infirmary and was seen by Dr. J. V. Paterson, who also was at a loss to discover anything at fault until the patient had assumed a stooping attitude for a few minutes. The patient's statement that his left eye protruded so long as his head was low was then confirmed. Nothing was suggested as regards treatment at that time, and he returned to work.

In May, 1912, the patient got his left foot crushed by a horse stepping on it, and was off work for five weeks. When able to be about again he noted that his eye was becoming worse.

On the evening of June 19th he spent fully two hours reading the Insurance Act, and had no discomfort when he retired to bed. But on waking on the following morning he found that his left eye and lids were protruded, and that he could not move this eye in any direction. There was partial ptosis of the left upper lid and severe pain going from the left orbit to the back of his head. Dr. Tod advised him to go to the Royal Infirmary. When he came to the eye wards on June 22nd the ptosis, protrusion, and fixation were marked, but there was no definite tumour, solid or cystic, nor any nodulation to be felt in the orbit. There was no pulsation nor thrill detectable, nor could any bruit be heard over the eye or temporal region. He had almost full vision. There was nothing abnormal to be seen in the fundus. Examination of the nose, pharynx, and accessory sinuses was negative. Yet it was evident that there must be some mass about the apex of the orbit pushing the contents directly forward and interfering with the proper innervation of the ocular muscles. As it was obviously desirable to explore the condition of the orbit as far back as possible without in the first instance opening into the fascial sheath, the case appeared to Dr. George Mackay to be one well suited for Krönlein's operation. Mr. Cotterill now saw him in consultation, and concurred in the above opinion. The patient was therefore transferred to the general surgical wards on July 1st, and operated upon the same day.

Operation.

A horseshoe-shaped incision was made at the outer side of the orbit, with its base directed upwards and outwards, the lower limb of the incision being carried backwards along the zygoma. The periosteal capsule of the orbit was detached and pushed inwards with the eye. The orbital margin of the frontal, the malar bone, and the zygoma were divided with a fine saw and chisel, and the bone thrown upwards and outwards with the skin flap. No new growth was palpable, but just inside the periosteum at the back of the orbital cavity a mass was felt which proved to be a haematoma. About a tablespoonful of recent clot was carefully removed by scoop and finger; and as nothing more could be felt except some thickening due to the wall of the haematoma, the wound was closed with horsehair stitches, and a collodion dressing applied.

After-History.

Two days later the proptosis was much less obvious, and by July 10th the wound was completely healed, and the eye apparently normal.

On July 24th the patient was discharged, and his only complaint was of slight diplopia on looking to the left.

Examined on December 12th, 1912, he reported himself fit and well. The vision of each eye was equal to $\frac{6}{6}$. There was no protrusion in any direction. The movements of the left eye appeared to be perfectly performed, but he stated that he had slight diplopia on looking to his extreme left, and that he had occasionally slight pain and sensations of stretching about the left temple. He admitted, however, that these were quite trivial, and that he was practically cured.

THE INFLUENCE OF SEPTIC INFECTION IN THE CAUSATION OF EYE DISEASE.

BY B. T. LANG, F.R.C.S.,

CHIEF CLINICAL ASSISTANT, ROYAL LONDON OPHTHALMIC HOSPITAL.

IT is known that inflammation is Nature's attempt to repair damage. It follows, therefore, that an inflamed eye must have been damaged, and that the inflammation occurs at or near the seat of the damage.

Suitable treatment of an inflamed eye implies finding the cause of its injury in order to prevent recurrence or continuance of its action. Where damage results from a perforating wound or ulcer the cause is obvious; but in the majority of cases of scleritis, keratitis, iritis, cyclitis, and choroiditis the cause is obscure. Cause there must be, and, since physical damage is excluded, we regard the chemical effects of bacteria or their toxins as that cause. Now bacteria cannot arise within the eye by a process of biogenesis; they or their toxins come from without, brought by the blood stream.

For many years kinship between recent gonorrhoea and iritis, between syphilis, iritis, and choroiditis, and between inherited syphilis and interstitial keratitis has been recognized. So much so that these lesions are known as "gonorrhoeal" iritis, "syphilitic" iritis, and "syphilitic" choroiditis; whereas other forms of iritis are termed "rheumatic," and choroiditis is designated "myopic," "diabetic," or "traumatic," and the like.

Many of these inflammatory lesions are infective and depend for their origin on some septic focus, from which the exciting substance must travel to the seat of the disease by the blood stream. Whether the causative agent is bacterial or toxic is uncertain. On the one hand, attempts to grow organisms from the fluid of the anterior chamber in cases of acute non-suppurative iritis always fail; on the other hand, the anterior chamber is very like a joint cavity, and gonococci can be seen in and cultivated from the joint fluid in cases of acute gonococcal arthritis. Histological demonstration of the bacteria in the inflamed tissues is out of the question, because no eye is ever excised during the onset of the acute stage.

Direct evidence is therefore unobtainable, and the views here expressed are based on the evidence that has been obtained by treating the supposed source of the infection. The eye itself has often been left severely alone, and at the most merely given physiological rest by the use of a mydriatic and bathed with hot water.

Septic foci occur in three situations:

1. Along the respirato-alimentary tract.
2. Along the genito-urinary tract.
3. On the skin or in a sinus leading from it.

The following cases are illustrative of the infective influence of chronic inflammation. The cases under review, with four exceptions, all occurred in my father's practice, and I am indebted to his notes for these abstracts. They

have all been seen during the last seventeen years, as this view of the septic influence on eye disease did not occur to him until 1895.

I. RESPIRATO-ALIMENTARY TRACT.

Chronically Inflamed Lacrymal Sac.

M. C., female, aged 45, had an inflamed eye with fine grey keratitis punctata and fine vitreous opacities. A chronically inflamed lacrymal sac was the only septic focus that could be found. The sac was removed and the eye rapidly recovered.

No case of intraocular inflammation traced to frontal or sphenoidal sinusitis has come under observation. One case of advanced choroiditis was met with, in which there was considerable ethmoidal disease—only slight improvement followed radical treatment of the nasal condition.

Empyema of the Antrum of Highmore.

Q. N., female, aged 34, suffered from defective vision associated with fine keratitis punctata. She had a chronic empyema of the antrum of Highmore, but as this did not worry her, she refused to have it treated. The keratitis punctata persisted for some months, and she then went abroad and has been lost sight of.

Chronic Suppurative Otitis.

M. L., female, aged 27, had an iritis with grey keratitis punctata and posterior synechiae. She had a chronic suppurative otitis. The ear was treated and the discharge cured, and the eye rapidly recovered.

Chronic Gingivitis and Pyorrhoea Alveolaris.

Chronic gingivitis is the commonest of all causes. It is not necessary for a tooth to be loose or for a socket to emit pus on pressure. Slight marginal inflammation around the necks of a few teeth is all that is required in a susceptible patient. Of the 176 cases under review, buccal sepsis was traced as the cause in 71.

CASE I.

E. C., female, aged 25, came for an opinion in December, 1909. Right eye quite normal; left eye vision = "hand movements." Glaucoma secondary to an iritis of three years before. The patient had pyorrhoea alveolaris.

Eight months later the patient returned on account of dimness of vision of the right eye, noticed a fortnight previously. V. = $\frac{6}{9}$, not improved by glasses. No keratitis punctata.

A fortnight later there were twelve large dots of keratitis punctata. Active treatment of the pyorrhoea was started, and the eye rapidly recovered.

Three months later right eye vision = $\frac{6}{9}$ and Sn. 0.25. No keratitis punctata present. She had completely recovered. She had had many teeth extracted, but had ten left, each surrounded by healthy gum.

Ten months later she returned with a mist in front of the right eye once more. V. = $\frac{6}{9}$ and fine vitreous opacities. Several of the remaining teeth found to be infected. Treatment of teeth started at once. A fortnight later, V. = $\frac{6}{9}$, two dots of keratitis punctata; and another fortnight later all teeth had been extracted.

There was absorption at the root tips and streptococci were cultivated from the roots. V. same, keratitis punctata still present.

Three months later, V. = $\frac{6}{9}$. Remains of keratitis punctata. Vitreous clear. Nine months later, patient quite well. Vision same.

CASE II.

M. Q., female, aged 38, realized in October, 1910, that she had had a mist in front of the left eye for a few weeks.

Right eye V. = $\frac{6}{9}$. Quite normal. Left eye V. = $\frac{6}{18}$. A few dots of keratitis punctata and a patch of superficial choroiditis in the yellow spot region. The treatment of the patient's pyorrhoea began next day.

Ten days later left eye V. = $\frac{6}{9}$ partly. Two dots of keratitis punctata.

A week later left eye V. = $\frac{6}{9}$ partly.

A fortnight later left eye V. = $\frac{6}{9}$ and Sn. 0.5. She could not see the whole of each letter at one time and reading was slow.

Four months later left eye V. = $\frac{6}{9}$ and Sn. 0.25. The patches of choroiditis were very faint.

CASE III.

W. U., female, aged 34, began to have an inflamed right eye in India in September, 1911. The patient's condition was regarded as syphilitic, and she was treated with mercury and potassium iodide; but the eye became worse. Five months later she came to England, when she was seen for the first time. Right eye V. = counts fingers at $\frac{1}{2}$ metre. Eye red, painful and tender. Much episcleritis, keratitis and iritis. No keratitis punctata.

Left eye V. = $\frac{6}{6}$. Quite normal. Many tooth stumps and much pyorrhoea alveolaris.

A month later eleven teeth or stumps had been removed. The eye got worse during the period of extraction, but rapidly improved after. Posterior synechiae had not broken down and the cornea was infiltrated in the centre.

A month later the eye was much better, and a fortnight after it was clear. There was no keratitis punctata. Three months later right eye V. = $\frac{6}{6}$. There was a large central nebula. The eye was quite quiet and there was no keratitis punctata.

Chronic Tonsillitis.

A chronically inflamed tonsil, particularly if any crypts are blocked with muco-pus, is a possible focus.

I. L. D., female, aged 43, had an iritis with posterior synechiae, and a chronically inflamed tonsil, which was removed. The iritis rapidly subsided.

A month later the eye was quite quiet.

In none of the cases under review was the cause traced to the naso-pharynx, larynx or trachea.

Lungs.

Tubercle of the eye is, of course, quite common; and in some cases the lungs also are infected. Whether the organisms are inhaled or ingested is unimportant so far as the treatment of the eye is concerned. In no case was the tuberculous focus in such a situation as would allow of the extirpation of the whole disease. Cases occurred of tubercle of the sclera, cornea, iris, ciliary body and choroid. The more recent have been treated with tuberculin injections.

Sepsis along the abdominal portion of the alimentary tract is not often demonstrably the cause of eye disease.

Chronic Gastritis.

Iritis occurred in four cases in which chronic indigestion was the only disorder of any kind that could be discovered.

Typhoid Fever.

In one case choroiditis was noticed after typhoid, which is indeed a recognized cause of choroiditis.

Chronic Appendicitis.

W. T., female, aged 28, in the beginning of November, 1911, noticed that there was a blur in front of the left eye. This gradually became more marked, and a fortnight later she came for an opinion. Right eye V. = $\frac{6}{6}$ quite normal. Left eye V. = less than $\frac{6}{60}$, Sn. 4.5. Large patch of central choroiditis. She was sent to a dentist, who treated a small amount of pyorrhoea. In spite of this the eye got steadily worse, and three weeks later she could not recognize the test type board across the room.

Three weeks later the right eye became similarly affected. V. = $\frac{6}{9}$ slowly, the vision being blurred just below the fixation point.

There were two small patches of choroiditis just above the yellow spot region. Two days later two more patches had appeared and the vision was $\frac{6}{12}$.

Two days later, right eye V. = $\frac{6}{18}$, patches larger. Left eye as before. Surgeon reported that the patient had chronic appendicitis. There was a history of two attacks some few years before.

Four days later appendicectomy was performed. The appendix was thickened and histologically showed signs of chronic inflammation.

A fortnight later the patches in the right eye had coalesced and it looked like the left. Twenty-seven days after the appendicectomy, right eye V. = $\frac{6}{9}$ and Sn. 0.5. Left eye V. = $\frac{6}{12}$ partly and Sn. 0.63. Discs normal. Diffuse pigmentary disturbance in both macular regions. Sclera not exposed.

Eight days later, right eye V. = $\frac{6}{6}$ and Sn. 0.5. Left eye V. = $\frac{6}{9}$ partly and Sn. 0.5. A fortnight later, right eye V. = $\frac{6}{6}$, 8 letters. Left eye V. = $\frac{6}{9}$. Blur, although still present, was less dense and was just over centre of fixation.

Five months later the vision was the same, the blur less pronounced.

This is the only case of choroiditis due to appendicular trouble, but E. F., male, aged 39, had several attacks of iritis; he had had seven attacks of appendicitis, and no other source of sepsis could be found.

There is no corresponding case due to chronic inflammation of a gall bladder.

Sprue.

In one case choroiditis occurred while a patient was suffering from sprue.

Chronic Colitis with Mucus.

This was apparently the cause in two cases, in neither of which could any other septic focus be found.

W. B., widow, aged 52, had severe colitis in June, 1907, which became chronic. Three months later an attack of iritis began in the right eye. A month later, when seen for the first time, there were two posterior synechiae and much keratitis punctata. The former were broken down in forty-eight hours by atropine, but the latter remained in spite of local treatment. Two months later iritis developed in the left eye.

A fortnight later she went abroad for her colitis; she returned four months later, by which time the colitis had subsided, and both eyes were quiet, and there was no keratitis punctata.

Dysentery.

One case of choroiditis occurred while the patient was suffering from dysentery in the tropics.

Chronic Constipation.

In 14 cases constipation was the only cause that could be found.

E. M., female, unmarried, aged 27, had an episcleritis. She was subject to periods of constipation, during which the eyes became red. When her bowels were freely open the eye quieted down. This occurred on several occasions.

II. GENITO-URINARY TRACT.

Bacterial Infection of the Urine.

R. M. M., male, aged 57, noticed at the end of November, 1911, that there was a blur in front of the left eye near the fixation point. V. = $\frac{6}{6}$, partly and slowly. There was a small patch of pigmentary disturbance near the yellow spot.

The patient was edentulous. His false teeth were quite clean. His urine was found to contain a streptococcus and a coliform bacillus in less than 0.001 c.cm. There was no albumen or pus. Vaccines were prepared and given over a period of three months. The blur gradually disappeared and the vision improved until four months later it was $\frac{6}{5}$. At this date there were no streptococci or coliform bacilli in the urine.

Urethritis.

The male urethra as the result of gonococcal infection is frequently the cause of eye trouble. The urethritis need not be recent. In iritis a definite history of gonorrhoea is sufficient to justify the administration of a gonococcal vaccine. These cases clear up rapidly if the vaccines are given in sufficiently large doses.

No case has come under observation where chronic inflammation of the Fallopian tube was the cause of any eye trouble.

Uterine Polypus.

L. D., aged 39, suffered from a recurrent iritis, with keratitis punctata. After the removal of a uterine polypus she had no further attack.

Utero-vaginal Discharge.

E. S., aged 26, suffered for four years from recurrent attacks of iritis. She had a chronic utero-vaginal infection with a Gram-positive anaërobic organism, which suddenly became acute. She was cured of it, and since that date she has had no return of her eye trouble.

III. THE SKIN OR A SINUS LEADING FROM IT.

Varicose Ulcer.

F. C., female, aged 55, was ill in bed with a varicose ulcer. Iritis with keratitis punctata developed in the left eye. No septic focus other than the ulcer could be found. Left eye, V. = $\frac{6}{6}$. The ulcer healed and the eye rapidly recovered. Two months later: Left eye, V. = $\frac{6}{5}$.

Chronic Purulent Discharge from the Navel.

E. M., female, aged 20, was suffering in May, 1903, from an iritis with posterior synechiae and keratitis punctata. Right eye, V. = $\frac{6}{9}$. The teeth were bad and were put in order. No other source of sepsis could be found. In spite of all treatment both eyes got rapidly worse.

Four months later: Right eye, V. = $\frac{6}{18}$ partly; left eye, V. = $\frac{6}{36}$. A physician found that she was suffering from a purulent discharge from the navel, which the patient admitted had existed for a year. When once this was treated and cured the patient's eyes made a rapid recovery. Three months leter: Right eye, V. = $\frac{6}{5}$; left eye, V. = $\frac{6}{9}$ partly. A year later: Right eye, V. = $\frac{6}{4}$ partly; left eye, V. = $\frac{6}{9}$ partly.

It not infrequently happens that two causes are acting at the same time, such as pyorrhoea and tubercle or tubercle and syphilis.

E. G., female, aged 37, was suffering from a cyclitis. Many vitreous opacities were present, and no fundus details could be seen. As her gums were extremely bad, her teeth were extracted, and the vision rapidly rose from "counts fingers at $\frac{1}{2}$ metre" to $\frac{6}{36}$. It was then possible to see the fundus. Diffuse choroiditis was present, and the suggestion of syphilis was borne out by a positive Wassermann reaction. The patient was inuncted with mercury and given a dose of salvarsan (0.6 gram), but the vision never improved beyond $\frac{6}{24}$.

Patients ofter suffer from some chronic inflammatory lesion for years without ill effect; then perhaps after some minor ailment which reduces vitality, such as exposure, trauma, or a "cold," the eye will suddenly become inflamed. That such minor ailments are only the exciting, and not the predisposing, cause, is shown by the fact that the eye remains inflamed long after they have ceased to act, while it recovers rapidly with the cleaning of the septic area. This is particularly noticeable after operations. Patients whose mouths are septic frequently take a long time to recover from such an operation as a cataract extraction. If, however, the septic focus is removed, the eye will often recover rapidly.

A. B., widow, aged 56, had a left extraction with iridectomy. On the fourth day there was a good anterior chamber, the cornea was bright, the pillars of the iris were free, but there was much scleral and circumcorneal injection. Six days later the eye was slightly worse. There was no keratitis punctata. Her teeth were found to be carious, and there was some pyorrhoea for which she was treated. A week later the eye was much better; a fortnight later the eye was white.

Susceptibility to the influence of chronic inflammation may be hereditary.

L. G., male, 54, had iritis. He explained that it was "gouty iritis." His father and his grandfather had had it before him, and he supposed that it must have been the port in the "good old days." He had a very septic mouth, which was put in order. He rapidly recovered from his iritis, and has not had another attack.

It may be worthy of note that the areas of septic inflammation which are found by analysis of these 176 cases to give rise most often to eye troubles are those that are subjected to frequent mechanical disturbance. For example, infection of the gums, which are massaged at each meal, or of the male urethra, which is continually disturbed during micturition, are each more productive of eye trouble than infection of the mucous membrane lining the frontal or any other sinus, or of the cervix uteri.

It may of course be argued that, whereas very many people have very septic mouths, very few have inflamed eyes, and that if there were any real connexion between septic teeth and inflamed eyes many more eyes ought to be inflamed. This seems to me to be an argument of little force, for whereas many men get gonorrhoea, very few get gonorrhoeal arthritis.

I would suggest that senility of itself and myopia of itself do not cause choroiditis. The senile arteritis and the stretching of the choroid in myopia each tend to reduce the resistance of the choroidal tissues. I suggest that these are really cases of septic choroiditis occurring in eyes that are in a weakened state. In support of this contention, I would like to point out how very much less choroiditis one sees in private patients with myopia than in hospital cases, and that senile central choroiditis is most frequently found in patients of the workhouse type.

CONCLUSION.

It is in no way desired to suggest that it is necessary in every case to find out and treat a septic focus to cure the patient. Many cases of iritis and the like recover under the influence of ordinary treatment and the action of drugs, but such cases frequently recur unless the septic focus is treated. In cases of choroiditis I believe it is necessary to treat the cause thoroughly early in the disease in order to obtain any great recovery of vision.

The object of this paper, and of the analysis of cases of which it chiefly consists, is to bring out the relationship of the patient's "general condition" to eye disease. Absolute proof that any one case recovered because one type of treatment was employed is impossible, and if my contention were based upon but two or three cases that had recovered as the result of treating (or removing) the supposed septic cause, I should base no argument upon it. It is the fact that no fewer than 176 cases have been subjected to careful analysis, which emboldens me to maintain the views here expressed. I hold that these eye conditions are often septic in origin and not due to anaemia, idiopathic tendencies, rheumatism, or the gouty diathesis.

THE Optimists (Lennox House, Norfolk Street, Strand, W.C.) are a group of business men whose object is to economize time and money in commerce. But among their list of fourteen specific aims there are two which will appeal to every one—they desire to save time wasted by irrelevance at public meetings and by unpunctuality at appointments.

RECURRING TORSION OF THE SPERMATIC CORD: OPERATION.

BY J. W. DOWDEN, F.R.C.S.EDIN.,
SURGEON, ROYAL INFIRMARY, EDINBURGH.

IN the BRITISH MEDICAL JOURNAL of April 29th, 1905, there was published a paper by me on the subject of "Recurring torsion of the spermatic cord, with an account of five cases."

The second case detailed was that of a lad, aged 16, who had suffered for four years previously from recurring attacks of pain every two or three months, which affected the left testicle. The onset of these attacks was always sudden. The pain, sickening in character, shot up towards the left kidney and caused prostration. In about a quarter of an hour vomiting occurred, and later, some swelling in the scrotum, followed by gradual cessation of the pain and disappearance of the swelling. These attacks passed off completely in a matter of a couple of days.

Mr. C. W. Cathcart, in whose wards the patient was at that time, most kindly asked me to operate for the condition. At the operation there was found the characteristic appearances associated with recurring torsion—clear fluid in the tunica vaginalis, a testicle and cord hanging free in this, and a broad arrangement of the cord with separation of the vas deferens from the vessels. The parietal tunica vaginalis was removed, and a strip of the visceral investment was separated with difficulty from the free aspect of the testicle. Catgut sutures were inserted to unite the surface of the testicle and the scrotal wall.

Since this operation (some nine years ago now) the patient has had no symptoms whatsoever referable to the left testicle. Some three years ago, however, he began to suffer from similar symptoms on the right side. In fact, so strongly did these symptoms imitate his previous condition on the left side that he applied for treatment in February, 1911, having recognized that his condition was similar in character to that which had affected his left side, and for which he was operated on nine years previously. He knew of no cause which precipitated the attack. It might come on while walking, standing, or lying in bed.

State on Examination.—Nothing definite could be made out in any way, and the history of his symptoms had entirely to be relied on. He was anxious to have an operation done, and this was performed in Mr. Cathcart's ward, and I am again indebted to that surgeon for his kindness in permitting me to carry out the second operation.

Operation.—An oblique incision was made over the right external abdominal ring. The tunica vaginalis was found to be large, and contained about 2 drachms of clear yellowish fluid. The testicle and cord hung free in the tunica vaginalis, but did not show the breadth nor the definite demarcation between the vas deferens and vessels which characterized the condition of the left side. The parietal tunica vaginalis was removed and the testicle fixed by catgut sutures to the scrotum.

The subsequent history was that of complete cure.

REMARKS.

The case is of interest on account of the diagnosed and successful treatment on the left side, now nine years since operation, but it is mainly of importance on account of the onset of symptoms affecting the right side, the recognition of the condition by the patient, and his request for operation. I have seen acute torsion of the spermatic cord in a man of 55 coming on for the first time and attributed to a slight injury.

THE Central Public House Trust Association, 15, Dean's Yard, Westminster, S.W., has issued for the use of motorists, cyclists, and other tourists and travellers a list of hotels and inns under the management of the Public House Trusts and the People's Refreshment House Association. General catering is a special feature of these trust houses, and the managers receive a personal profit from the food and non-alcoholic trade. Excellent bedroom accommodation, it is stated, is to be found in the majority of the houses, but in some of the smaller village inns it is of the cottage type. The list is remarkable, inasmuch as it gives the names of inns in many small places in which the motorist or cyclist might not expect to find a comfortable and well-conducted house. The pamphlet is provided with an index.

SIX CASES OF HYDROCELE IN INFANTS TREATED BY OPERATION.

[WITH SPECIAL PLATE.]

BY JAS. H. NICOLL, M.B., C.M.GLASG.,
SURGEON, WESTERN INFIRMARY; EXTRA SURGEON, ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

IN a paper on the surgery of infancy, read at the Meeting of the British Medical Association in Belfast in August, 1909,[1] and based on an experience of some 9,000 operations up till then performed on children treated as out-patients, I advocated the relegating to the out-patient operating theatre of a much larger number of the cases treated in our children's hospitals, and particularly pleaded that "in children under 2 years of age there are few operations indeed which cannot be as advantageously carried out in the out-patient department as in the wards," with great gain to the hospital's accommodation and efficiency. My views have not been left uncriticized. In particular, operations for hernia were singled out by certain critics as being unsuited for out-patient treatment. As a matter of fact, as our statistics show, operations for hernia in out-patient infants are amongst the safest and most efficient of all our operations. More recently the opinion has been expressed that the operative treatment of hydrocele is unsafe in the out-patient department.

The opinion is as ill-founded as that expressed regarding hernia. My experience has been that the operative treatment of hydrocele in children is as uniformly successful in the out-patient as in the in-patient department.

During November and December I have operated on the following six cases of hydrocele in the out-patient department of the Royal Hospital for Sick Children, Glasgow:

Name.	Age.	Date of Operation.	Result.
John S.	2 months.	Nov. 8th, 1912.	Primary healing.
John L.	2 weeks.	Nov. 8th, 1912.	Primary healing.
James M.	5 months.	Nov. 15th, 1912.	Primary healing.
John W.	4 months.	Nov. 22nd, 1912.	Primary healing.
John L.	3 months.	Dec. 3rd, 1912.	Primary healing.
Allan W.	18 months.	Dec. 27th, 1912.	Primary healing.

All were cases of hydrocele of the ordinary "acquired" type. No local preparation was done till the child was under anaesthetics on the table. The dressing was a small pad of sterile gauze fitted by a strip of adhesive plaster. The children were taken home by their mothers after operation, and brought back in a week for removal of dressing and sutures.

The operation performed in all six is indicated in the drawings made for me by Mr. A. Kirkpatrick Maxwell. A skin incision (1 to 1½ in.) was made just above the groin over the inguinal canal, and the spermatic cord exposed just below the ring. The testicle and hydrocele were pushed up into the wound, and the upper end of the hydrocele sac exposed by a few snips of the scissors (Fig. I). The exposed sac was then emptied by trocar and cannula (Fig. II). The collapsed sac with the testicle was then pulled out of the wound, and the sac dealt with—either by tearing out its internal serous lining, by complete excision, or by bisection and suture of its halves back to back behind the testicle. Replacement of the testicle in the scrotum, and suture of the wound in the groin completed the operation.

(In the comparatively small hydroceles of infancy no drainage is necessary. In operating by this method for large hydroceles in adults, it is advisable to use a drainage tube, reaching from the wound to the bottom of the scrotum, for forty-eight hours.)

[1] BRITISH MEDICAL JOURNAL, vol ii, p. 753, 1909.

AT the recent examination held by the Sanitary Inspectors' Examination Board for inspectors under the Public Health (London) Act (1891), fifteen candidates passed, all but one of them women.

MR. JAMES H. NICOLL: HYDROCELE IN INFANTS TREATED BY OPERATION.

FIG. I.—Upper end of hydrocele sac pushed up to, and exposed in, the wound over the inguinal canal.

FIG. II.—Sac emptied by cannula through wound above groin.

OCCLUSION OF THE INFERIOR VENA CAVA, AS A RESULT OF INTERNAL TRAUMA (DISSECTING VARIX?)*

THE CASE OF THE LATE DR. W. RIVERS POLLOCK.

BY

S. G. SHATTOCK, F.R.C.S.,

PATHOLOGICAL CURATOR, ROYAL COLLEGE OF SURGEONS, ENGLAND; JOINT LECTURER ON PATHOLOGY, ST. THOMAS'S HOSPITAL.

THE parts which form the subject of this communication were bequeathed to the Royal College of Surgeons, for dissection, by the late Dr. W. Rivers Pollock, at the time of his death (1909) Obstetric Physician to the Westminster Hospital; and this he did, by reason of the singular, if not unique, clinical history connected with his disease. I may first give the latter, then describe the specimen, and finally make a short comment on the case.

History.

In 1884, Pollock, when about 24 years of age, and in a condition of perfect health, won the 120 yards hurdle race in the Cambridge University sports—16⅕ seconds.

In the same year he ran successfully for Cambridge against Oxford, performing the same feat in 16 seconds. He held his breath during the whole time.

This record has since been equalled; and was broken in 1907 by K. Powell, of King's College, Cambridge.

Immediately after the race was over he lay on the grass, and within a few seconds complained of pain in the lumbar spinal region. He was put to bed, where he remained for six months.

Oedema of the legs, and to a lesser degree of the abdomen and scrotum, supervened at once, and persisted for the period mentioned. Whilst in bed, the superficial veins began within a few days to dilate, and this dilatation slowly progressed.

During the rest of life the distended veins were supported by the systematic use of carefully adjusted elastic pants reaching as high as the thorax.

Albuminuria appeared directly after the event, and persisted throughout life. Death occurred on October 5th, 1909—twenty-five years later.

Mr. Arthur Evans, who attended the patient during the last six years of his life, informs me that he was subject to attacks of phlebitis and thrombosis in the enlarged saphenous veins, these attacks being readily brought on—for example, by the pressure of a crease in the elastic pants.

On September 25th, 1909, the patient noticed some tenderness and discoloration behind the right internal malleolus; this extended to the dorsum of the foot; on the 29th the temperature was found to be 100° F., and he had a slight rigor. The next day his throat became sore, and on October 1st the signs of well-marked tonsillitis appeared, the lesion on the foot having vanished. The throat became more painful, and the temperature kept up. On October 4th, the right tonsil was freely incised under gas; not more than three or four drops of pus escaped. Death took place on the day following, and was attributed to tonsillitis and septicaemia.

Dr. J. N. Bernstein, who made the autopsy, tells me that, although carried out within six hours after death, there was such a degree of generalized emphysema as to render a satisfactory examination of the viscera impossible.

Description of the Specimen.

The preparation comprises the superior and inferior venae cavae, wanting their cardiac terminations. The right azygos vein is considerably dilated.

Except for its highest part, the whole of the portion of the inferior cava preserved is converted into a flat impervious ribbon, which is most contracted and thinnest for a distance of 6.5 cm. (2½ in.) opposite and below the renal veins. A portion has been cut away from the front of the vessel below the veins last named, showing that its lumen is completely occluded. The common iliac veins and the portions of the external and internal preserved are likewise flattened and obliterated, though somewhat less reduced in size, owing to the presence of internal adherent coagulum. The tributaries and trunk of the left renal vein are pervious, though, as tested with the probe, the entrance of the latter into the cava is closed. The same is true of the trunk of the right renal. The right spermatic vein, as far as its entrance to the cava, is likewise pervious. From the left side of the lower part of the cava there projects the occluded end of one of the lumbar veins of the same side. The upper divided end of the inferior cava is pervious, though reduced in size.

It was found during the dissection that the hepatic veins were unoccluded.

Remarks.

Occlusion of the inferior vena cava as a result of infective thrombosis is a well-known condition, and not a few examples of it have been met with, the thrombus extending into the main trunk from some of its tributaries, either from the femoral and iliac veins below—for example, in typhoid infections—or from the hepatic veins above. Occlusions arising from the direct invasion of the wall by new growth, or by the extension of malignant tumours, of the kidney along the renal vein, are likewise well recognized, though rare occurrences in pathological anatomy. Any suggestion of such an infective origin in the case under notice, however, is excluded by the history. It is incredible that an infective disease should have been present in an athlete in such perfect condition as to have accomplished the feats recorded. Contrast it, for example, with the following, which lately came under the care of Dr. C. R. Box at St. Thomas's Hospital.

A man, aged 21, ten weeks before his admission to the hospital, felt out of health, and had a rigor, which he attributed to a bicycle ride. During the next five weeks the rigors recurred on two or three occasions; finally he fainted whilst at work. Swelling of the abdomen followed, and 5 pints of serum were removed. When admitted, on September 6th, 1912, he was suffering from ascites and enlargement of the liver; there was no evidence of nephritis. Paracentesis on September 10th was rapidly followed by reaccumulation; the abdomen was opened, but no cirrhosis or tuberculous disease of the peritoneum was found. There was no appreciable oedema of the legs.

Death occurred, with dyspnoea and cyanosis, on September 23rd. He had no rigors whilst in the hospital, but there was slight fever of remittent type; the urine contained a trace of albumen. *Post mortem*, there was an adherent thrombus, with softened centre in the inferior cava behind the liver; the cava below was filled with more recent non-adherent clot, which did not entirely occlude it. The clot did not reach into the iliac veins, but superiorly it extended for a short way into the right auricle. Organizing thrombi were found on microscopic examination in the hepatic veins throughout the liver. The portal vein and its tributaries were normal.

The liver, spleen, and kidneys were congested; the lower lobes of both lungs were the seats of pale infarcts. In Dr. Pollock's case the occlusion of the cava arose under such exceptional circumstances as to indicate some exceptional factor in its etiology. And the hypothesis which I venture to put forward is that in consequence of the extreme distension of the inferior cava, occasioned by the holding of the breath throughout the race, a localized rupture of the intima, or of this and the media, took place, which was followed by the forcible extravasation of blood into the walls of the vein—whilst, that is, the exertion was still in progress; that the lesion, in short, in its initial stage, was the counterpart of a dissecting aneurysm of the aorta. Since by classical usage the word "aneurysm" is confined to arterial dilatation (Galen), whilst swelling of the veins has from the time of Celsus been known as varix, the term "dissecting varix" would be that best suited to meet the condition supposed.

The initial lesion would be like that of a dissecting aneurysm, but the two would soon lose their resemblance. In the case of the aorta, the internal pressure is maintained, and the dissection may proceed to great distances, the blood in most cases finding its way again into the arterial system through a consecutive and

*Read before the Pathological Section of the Royal Society of Medicine.

more distant rupture of the intima; and the intramural channel, if death does not ensue, becoming lined with organized coagulum, and converted into an adventitious collateral.

In the case of the vein, on the relief of the abnormal internal pressure, further extravasation into the wall would cease—the normal intracaval pressure would be too low to prolong it. But, as a result of the intramural extravasation, the calibre of the vein would be so reduced, if not actually closed, that secondary thrombosis would take place, which would eventually occlude the channel. All the nucleated cells of the body are capable of furnishing thrombokinase. And after the partial rupture supposed, the ferment would be furnished by the injured tissues as well as by the leucocytes. From the intramural clot the coagulum would extend, at the site of the rent, into the diminished lumen of the vein, and so bring about its complete occlusion.

The intramural coagulum would subsequently undergo a transformation similar to that occupying the lumen, and in process of time become indistinguishable from the proper coats of the vessel.

The transverse rent of the intima and media that is so readily produced in the aorta or other artery by the application of a tight ligature, or by compressing the vessel transversely in a Spencer Wells's forceps, is not producible by the same violence in the cava or other vein. This difference is to be explained mainly by the direction of the muscle fibre. In the case of the artery the ligature sinks without much resistance into the media by displacing its circular fibres, the externa remaining intact; the intima is ruptured last. This can be shown by tying an aorta upon a test tube.

If the force used is not extreme, it will be found on slitting up the artery and examining the cut edge with a hand lens, after making gentle longitudinal traction, that the externa and intima are intact, whilst the media is cleanly ruptured. In the larger veins, like the cavae and iliacs, the longitudinal disposition of the chief part of the musculature, whether on the inner or outer side of the circular fibres, together with the admixture of white fibrous tissue with the muscle, prevents the ligature from penetrating in the same way. The inner coats of a vein can be ruptured, however, by internal tension.

If a pair of lithotomy forceps is introduced into the common iliac vein, or the cava, and slowly opened out until a rending sensation is felt, it will be found on slitting up the vessel that the inner and middle coats present one or more longitudinal ruptures, the external remaining intact.

This is the lesion that I presume occurred in Pollock's case.

This view will commend itself the more if one endeavours to picture what the condition of the inferior cava would be in the particular circumstances under which the accident occurred.

In the first place it is an old observation (known as Müller's) that if a prolonged inspiratory effort is made with the mouth and nostrils closed, the negative pressure, or *vis a fronte*, so induced within the thorax, results in such a filling of the intrathoracic veins, systemic and pulmonary, and of the two auricles (the lungs being unable to expand and aid in filling the potential space) that the auricles become overdistended, and rendered incapable of efficient contraction; and this to so high a degree that the pulse becomes imperceptible.

The embarrassment of the auricles is due not to excessive internal pressure, but rather to the fact that their musculature is too weak to enable it to cope with the negative pressure acting without; for the ventricles may continue to beat, though, as they are receiving little or no blood, none reaches the systemic arterial system.

The connexion of Müller's name with this observation is, as Dr. Augustus Waller has shown, one of the incongruities encountered from time to time in the history of science. The observation was originally made by Frey, and in recounting Frey's experiment Müller appends a brief footnote, in which he suggests that the cessation of the pulse is due to kinking of the subclavian arteries. The name of Müller has, therefore, in some inexplicable way, become transferred from this, his suggestion, to the actual experiment.

Secondly, in the converse observation (Valsalva's), a prolonged, forcible, expiratory effort, with a closed airway, will likewise stop the pulse by reason of the general compression of the thoracic viscera.

Professor A. Keith[1] has pointed out that the venae cavae, with the innominate, iliac, hepatic, and renal veins, being closed off below by the valves in the common femorals, and above by those in the subclavian and jugulars, constitute a cistern or reservoir, which may be filled from its tributaries, but which can only empty itself through the right auricle.

In Pollock's case, so far as the *vis a tergo* is concerned, it is clear that the influx into the cavae, or the venous cistern, would reach its highest mark, seeing that the active muscular contractions of the limbs and trunk would drive the blood through the peripheral tributaries into the reservoir without its being able to return. Some reflux through the hepatic veins by way of the capillaries of the liver into the main, and valveless trunks of the portal system might occur, though this would be limited by the comparatively short space of time the effort lasted, and by the general compression of the abdominal viscera maintained by the contracted state of the parietes. But the state of things within the thorax is not so easily determinable.

The chest, it is true, was in the expanded position, but dynamically the condition was one of forced expiration, prevented by the closure of the airway; in addition to this there would be the less important positive pressure exerted by the elasticity of the expanded lung itself.

Under these circumstances, although little diminution in the volume of the lungs (only that due to compression of their contained air) could take place, the intrathoracic vessels and the heart would be amenable to the effects of pressure, since the exit of blood forwards by the aorta would be free, and the outlet backwards from the right auricle into the cavae would still remain open. The tricuspid valve, which is never fully competent in the normal condition (as tested after death), would allow, again, of some reflux into the right auricle, and so into the venous cistern.

The point not so easy to determine, then, is whether the expiratory effort with a full chest and closed airway would compress the auricles and intrathoracic veins so as to empty them, as in Valsalva's experiment; or whether these would remain overdistended and embarrassed, as in Müller's. The first view is probably the correct one.

In either case an intrathoracic stasis would result; and as the forcible expulsion of blood from the veins of the limbs and trunk into the cavae proceeded, the pressure within the cistern would continue to rise until it led to rending of the internal coat at some spot in its most capacious segment, namely, the inferior cava; and below the entrance of the hepatic veins.

The cava, in fact, behind the liver is supported by the sides of the deep sulcus, or even canal, in which it lies; the second arrangement is well shown in Braune's fifteenth plate.

This would tend to make the stretch below, the seat of highest distension; and this is where the obliteration has taken place. That the trauma arose below the entrance of the hepatic veins is shown not only by the patency of the latter, found after death, but by the total absence of ascites from the clinical symptoms.

The safety of the auricles under overdistension in general may be, as Professor A. Keith[2] has suggested, due to the support the pericardium would furnish when its capacity of reserve was overdrawn.

The possibility of such an injury having arisen not from distension, but from mechanical strain acting *ab extra*, may be dismissed. The cava is nowhere tightly fixed to the spine, it is not included between the crura of the diaphragm; and as the diaphragm would be in some position of descent, no longitudinal stress arising from causes external to the vein can be assumed to have taken a part in producing the result.

Lastly, there arises a question whether in Pollock's case there was any predisposition to the occurrence of thrombosis—that is, an exalted coagulability which might occasion thrombosis under conditions that would not otherwise have availed.

This question is raised by the fact that one of the patient's brothers had previously died abroad with oedema of the lower part of the body, which had been attributed to the pressure of a supposed sarcoma upon the inferior vena cava, and that another brother had died from embolism of the pulmonary artery following thrombosis of the femoral vein.

That there may be a familial condition which is the converse of the haemophilic, one of exalted coagulability, is quite credible, but I cannot find that such has as yet been observed in healthy individuals—that is, a constant abnormal rapidity of coagulation in the shed blood as distinguished from the variations which occur under well-recognized conditions in the same individual.

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VACCINE-THERAPY IN CHRONIC BRONCHITIS.

BY
H. T. GILLETT, M.D.,
OXFORD.

IT seems probable that a large proportion of cases of bronchitis are caused by an invasion of the bronchial mucosa by pathogenic organisms.

Ritchie[1] made a number of *post-mortem* examinations of children who died of acute bronchitis, and showed that the bronchitis was caused by micro-organisms, chiefly the *Diplococcus pneumoniae*, streptococcus, *B. influenzae*, and *M. catarrhalis*. Berkart[2] believes that some forms of bronchial asthma are due to a specific inflammatory condition of the bronchial mucous membrane caused by microbic influences.

If the micro-organisms are responsible for causing attacks of bronchitis, we should expect that relief and cure would follow the injection of a suitable vaccine in suitable doses. Clinical experience has already borne this out. Latham[3] recorded 5 cases which he successfully treated by vaccines. H. R. Smith[4] recorded 3 cases treated by vaccines, with favourable results, the duration of these cases before treatment being sixteen years, eight years, and six years respectively. Shivdas[5] has recorded 39 cases, of which 21 were completely satisfactory.

I have treated bronchitis—both acute and chronic—by this method, but I propose to record here only the first 8 chronic cases in the order in which I attempted to benefit them. I used only autogenous vaccines with one exception. Stock vaccines may be sometimes effective, but a stock vaccine of similar morphology to the causal organism does not necessarily correspond to it in every respect. So that it seems safer to use only autogenous vaccines.

The sputum was collected as far as possible aseptically—boiled water was used for brushing the teeth and rinsing the mouth; a little was also gargled and swallowed. The next phlegm was expectorated into a bottle that had been boiled. Smears of the sputum were made and stained for tubercle bacilli and other micro-organisms. A little of the sputum was then washed and shaken up with sterile saline and one or two loopfuls sown on one or more of the following media: Agar, Pfeiffer's agar, and nasgar. From the growth of fifteen to thirty-six hours the vaccine was made up. The dilution with sterile saline was made with a view to avoid the necessity of subculturing, as it has been said that subculturing reduces the efficiency of the vaccine. By this means it is impossible to obtain pure cultures, but it is easy to judge what is the important micro-organism, and to regulate the doses accordingly. The frequent accompanying forms of *M. catarrhalis* can do no harm, and possibly are often requisite to make the treatment successful.

There can be no doubt that a number of Gram-negative organisms are classed together under the term *M. catarrhalis*, and it is difficult at present to know which to exclude and which to include in the vaccine.

CASE I.

Female, aged 75, had suffered with a cough for forty years, with occasional attacks of acute bronchitis. When she began this treatment in November, 1911, she had just recovered from an acute attack. The sputum was nummular; there were no tubercle bacilli, but smears showed that it was full of pneumococcus. By the dilution method I obtained a practically pure growth of pneumococcus. The vaccine was given about once a week in increasing doses, starting at 25 million. After three months' treatment she had lost her cough, had improved in general health, and gained 3 lb. in weight. Treatment was continued for five months altogether. There has been no recurrence of the cough up to the present.

CASE II.

Female, aged 65, had had a bad attack of influenza seventeen years earlier. Ever since that attack she had had a chronic cough, bringing up about 2 oz. of phlegm daily. The vaccine of streptococcus and *Micrococcus catarrhalis* was given in doses of 1 to 20 million, beginning treatment on February 12th, 1912. She was at that time unable to lie down flat at night, but after four injections she was able to do so. The cough and sputum ceased at the end of five weeks, and her appetite and general condition improved. However, in July she began again to bring up a little sputum, but after three injections of a vaccine similar to the previous one the cough completely disappeared, and she has remained free from it since.

CASE III.

Female, aged 35, had had bronchial "asthma" for fifteen months. In March, 1911, she was an in-patient at the Radcliffe Infirmary for two weeks, where she was treated for "bronchial asthma." She sometimes improved a little, but nothing seemed to give her permanent relief. She was able to get about, but was very short of breath and frequently had dyspnoeal attacks, particularly at night. She used to wake regularly at 2 a.m. and had very little sleep. She was cook in a family, and her mistress valued her and was anxious to keep her on if she could be cured. So I suggested we might try a vaccine. I gave the autogenous vaccine of streptococcus at intervals of about a week in increasing doses, beginning with an injection of 15 million on February 27th, 1912. She was soon able to lie down at night and to sleep through until the morning. Treatment was continued for four months. The amount of sputum at the beginning was 8 oz. daily; at the end of treatment it was scarcely half a drachm. She was better in every way; she could go upstairs without shortness of breath. She gained 9 lb. in weight. The cough and dyspnoeal attacks have entirely ceased and there has been no relapse.

CASE IV.

Female, aged 65. Had suffered for eighteen months from bronchitis and dyspnoea. When I saw her first the cough was almost incessant, the breathing was laboured, and she could not lie down in bed. Her nights were very much disturbed. The daily amount of sputum was 1½ oz. The autogenous vaccine of pneumococcus and *Micrococcus catarrhalis* was given in increasing doses at intervals of about a week, beginning on March 26th, 1912, with an injection of 25 million. She soon began to improve, and within four weeks she was able to get downstairs, and was sleeping through the night instead of waking with the cough between 1 and 3 a.m. The expectoration was easier, and the daily amount of phlegm steadily diminished till at the end of nine weeks there was none at all. Treatment lasted three months. Sixteen injections were given altogether.

In this case there was recurrence in November, and she is at present having treatment with a fresh vaccine.

CASE V.

Female, aged 32; five months before I saw her she had an "influenza" attack, with a "cold on the chest," and loss of voice. From that time she had been suffering from repeated colds and coughs. I examined smears of the sputum, and found the predominating organism was *Micrococcus catarrhalis*. In May, 1912, I gave her two injections of a stock vaccine with an interval of five days. The cough was considerably improved, but as she could not stay longer in Oxford the treatment was not continued. I heard recently that her cough is still troublesome.

CASE VI.

Female, aged 42, had been subject for two winters to recurring attacks of bronchitis. She was generally "wheezy" on waking in the morning, and always got very short of breath on exertion. Treatment was commenced on May 9th, 1912, with the vaccine of pneumococcus and *Micrococcus catarrhalis*. She improved rapidly, and after three weeks' treatment she walked about five miles one day; she had not walked so far for several years.

At the end of two months she had completely lost her morning wheeziness and cough.

There was some recurrence in November, but it cleared up again after a few injections of the same vaccine.

CASE VII.

Female, aged 45, had a "bronchial cold" for three months, which did not clear up with ordinary drug treatment.

The autogenous pneumococcus vaccine was given first on June 19th, 1912—dose 42 million. After this dose she was conscious of more stuffiness on her chest, and there was also more cough, though the phlegm was looser.

The second injection of 84 million was given nine days later; there followed the usual negative phase with more cough and phlegm, but this was soon followed by improvement. She felt much more energetic, and there was hardly any cough.

Ten days later the third injection of 84 million was given. After this the cough completely cleared up.

CASE VIII.

Female, aged 53, had suffered from recurring pharyngitis, laryngitis, and bronchitis. The present attack persisted for over a month in spite of treatment by drugs and inhalations. She complained of difficulty in getting her breath, hoarseness of voice, dryness of throat, and tired feeling. Smears from the sputum showed streptococci; an autogenous vaccine of streptococcus and *Micrococcus catarrhalis* was made up. Treatment by vaccine was begun on June 19th, 1912.

Three injections were given in the course of eleven days—doses of 50 up to 100 million. There was the usual negative phase after each injection, followed by an improvement in the symptoms. The voice was not so husky, the throat was moist, the tightness of the chest was relieved, and there was more energy and feeling of well-being. All the symptoms cleared up after the third injection.

In the foregoing eight cases no drug treatment was given while the vaccines were being administered, except in Case IV, who had an expectorant mixture for a few weeks.

Three of the eight cases recurred. Of these, Cases II and IV soon recovered again after a few injections, and Case IV is at present improving.

The injections were given without opsonic control; this method of control has of late been largely discontinued. The dosage was judged by the effect produced by the first and subsequent injections on the general symptoms as well as by the amount of local reaction at the site of injection. The first injection in each case was well within the recognized dosage. If there followed very little or no negative phase the next dose was often doubled. If the negative phase was marked, the same dose (or a smaller one) was given in about ten days' time. But usually I was able to increase each dose by about one-third to one-half of the former one, and my aim was to try and obtain a reaction during the following twenty-four hours.

It has been recognized that a course of small doses where reactions have not occurred may be ineffective in producing immunity.

CONCLUSIONS.

Where failure occurs in treatment by vaccine-therapy, the question should be considered whether the failure was due to the patient's feeble powers of response, or to the method of preparation and dosage of the vaccine. With this in view one would pay particular attention to the following points:

1. Make sure what micro-organism is the cause of the trouble and whether others are associated with it.
2. Use an autogenous vaccine in preference to heterogenous.
3. Make it up from *fresh* sputum; try different media for its preparation; grow the micro-organism for not more than twenty-four hours if you can get sufficient growth in that time; avoid subculturing as far as possible; sterilize by heating to 60° C. for a quarter of an hour instead of one hour, or in some cases merely by the addition of 0.5 per cent. carbolic.
4. Give doses large enough to produce a reaction but avoid a prolonged negative phase.

Though vaccine-therapy may be said to be still in its infancy, yet it has already achieved a great deal, both in the prevention and cure of various bacterial diseases. And now that serum-therapy can be combined with vaccine-therapy by giving sensitized vaccines, it seems probable that in the future it may accomplish still more, especially in acute cases such as pneumonia and septicaemia, and will eventually largely replace the treatment by drugs in those diseases which are caused by micro-organisms.

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LAST year the Royal Institute of Public Health held its annual congress in Berlin; this year it is to be held in Paris from May 14th to 18th, in response to an invitation from the Municipal Council. There will be five sections: (*a*) State Medicine, (*b*) Bacteriology and Comparative Pathology, (*c*) Eugenics and Child Study, (*d*) Naval, Military, and Colonial, (*e*) Industrial Hygiene. Facilities will also be afforded for visiting the various public health educational institutions in Paris in connexion with the Board of Health, municipality, universities, etc.

SUPRACLAVICULAR ANAESTHETIZATION OF THE BRACHIAL PLEXUS.

BY

WILLIAM F. NEIL, F.R.C.S.ENG.,

LATE SENIOR HOUSE-SURGEON, GENERAL HOSPITAL, NOTTINGHAM,

AND

FREDERICK CROOKS, M.B., B.CH.,

SENIOR HOUSE-SURGEON, GENERAL HOSPITAL, NOTTINGHAM.

THIS form of anaesthesia was first brought to notice by Hirschel[1] in 1911, and later in the same year an article was written by Kulenkampff[2] giving an account of 100 cases. Early in 1912 Borcher[3] published the results of 35 cases; since then it has been used extensively on the Continent.[4] It is convenient, appears to be free from danger, and by its use severe operations on the arm can be performed painlessly and without shock.

The technique of the injection is easy after a little experience. The brachial plexus is injected at a point which roughly corresponds to the middle of the clavicle. Here the plexus lies close under the skin, so that in many cases its position can be defined by pressure over the first rib. It emerges from under the scalenus anticus muscle, and lies in loose tissue which is easily infiltrated. The area into which the solution is injected is bounded internally by the subclavian artery, externally by the clavicle, and below by the first rib.

The patient sits with head turned slightly towards the opposite side. The position of the subclavian artery is defined by palpation, and the puncture made just external to the artery. The site of the puncture is usually just internal to the point at which the continuation of the external jugular vein joins the clavicle; but in some cases, in which the artery lies further out than usual, the puncture must be made external to this point. However, the artery is the chief guide to the position of the plexus, and after a little experience we find that it can be used as the sole landmark. A fine needle 4 to 5 cm. long should be slowly inserted in a direction backwards, downwards, and inwards towards the second or third dorsal spine, so as to strike the upper surface of the first rib. As the plexus lies about 1.5 to 3 cm. from the surface just superficial to the first rib, it should be encountered before the first rib is reached. If the plexus is not struck before the first rib is reached it generally means that in order to avoid the artery the needle has been inserted too far out. The needle must be partially withdrawn and altered in direction, usually towards the artery, until the plexus is struck. When the needle reaches the nerve cords paraesthesia is produced in the arm and hand; when the paraesthesia has been definitely obtained the syringe is carefully attached to the needle and 20 c.cm. of a 2 per cent. solution of novocain with adrenalin injected. No solution should be injected until paraesthesia is definitely obtained, and it is important to remember that when the point of the needle is on the first rib it is too deep for the plexus. Apart from the skin puncture the injection is not painful, the paraesthesia in the arm is not severe, and any necessary alteration in the position of the needle is not accompanied by pain. We do not consider it advisable to make a subcutaneous infiltration, as it tends to obscure the landmarks; besides, with the fine needle, very little pain is caused on puncturing the skin, and only one skin puncture should be necessary.

The anaesthesia comes on gradually, and is usually complete in from five to fifteen minutes, but may require as long as thirty minutes to fully develop. The onset is associated with sensations of heaviness and tingling in the arm, and is usually accompanied by paresis. The extent of the paresis is in direct relation to the depth of the anaesthesia. The anaesthesia does not always develop simultaneously over the whole arm, and one part, usually the back of the forearm, may retain slight sensation for a short time after the anaesthesia has become complete over the rest of the arm. The area of anaesthesia extends up the arm to about 2 or 3 fingerbreadths below the acromion process, but usually a small sensitive area is found on the inner side of the arm, corresponding to the distribution of the intercosto-humeral nerve.

The duration of the anaesthesia is usually from one and a half to three hours, depending on the depth of the anaesthesia; we find that at least one and a half hours of anaesthesia can be relied upon.

To obtain satisfactory anaesthesia the following points must be strictly adhered to:

1. Definite paraesthesia in the arm or hand must be obtained before any solution is injected.

2. The injection should consist of 20 c.cm. of a 2 per cent. solution of novocain. If these points are not adhered to the anaesthesia is likely to be light and patchy. Any solution injected near the plexus before paraesthesia is obtained may interfere with obtaining this paraesthesia, and so prevent localization of the plexus.

3. To allow sufficient time for anaesthesia to develop, usually five to fifteen minutes is sufficient, but as long as thirty minutes may be required.

This form of nerve blocking is free from danger, but the following objections have been raised against it:

1. The risk of injuring the subclavian artery. This should be avoided, as the artery can be distinctly felt. It has been proved that puncture of the artery by a fine needle produces no ill effects.[5]

2. The pleura may be injured, and the solution injected into the pleural cavity. This is avoided if the instructions are carried out and the needle inserted until it comes into contact with the first rib, but no deeper.

3. The possibility of paralysis of the nerve trunks of the arm arising as a result of the injection. There is only one case on record.[6] In this instance there was paresis of the musculo-spiral, median, and ulnar nerves, which lasted a few weeks. We have not met with any cases of paresis, and we consider its occurrence very unlikely.

Care should be taken not to inject the solution into a vein. To prevent this, the plexus should be sought for with the needle alone, when, if a vein is punctured, the blood will flow freely from the needle. Puncture of a vein produces no ill effect beyond a slight swelling in the neck.

As we have found novocain the safest and most satisfactory drug for local and regional anaesthesia we have used no other in our series. We have had no toxic effects in any of our cases from using 20 c.cm. of a 2 per cent. solution. And as will be seen from a study of the cases when a weaker solution was used the anaesthesia was not so complete and was slower in developing.

We use a fine platinum-iridium needle, 6 cm. in length. (These have been made for us by Messrs. Down Bros.) These needles stand sterilization better than, and are not so liable to break as, steel needles of the same calibre.

The cases below are the first forty tried at this hospital, and include all our failures:

No. of Cases.	Operations.	Remarks.
2	Amputation through forearm	One incomplete anaesthesia.
4	Amputation of fingers	One incomplete anaesthesia.
6	Reducing impacted Colles's fracture	Two failures.
6	Setting fractures of forearm	Complete anaesthesia.
11	Suturing tendons and lacerations of arm	Two failures and one incomplete anaesthesia.
4	Incising cellulitis of arm	Complete anaesthesia.
1	Sequestrotomy of humerus	" "
1	Reducing dislocation of shoulder	" "
1	Plating radius and ulna	" "
1	Wiring olecranon	" "
2	Moving stiff elbow	"
1	Scraping necrosed metacarpal	Incomplete anaesthesia; only 20 c.cm. of 1 per cent. was used.

In 36 of the cases we injected a 2 per cent. solution of novocain, using 20 c.cm. for an adult and about 15 c.cm. for a patient under 16 years. In this series there were three failures (Cases 8, 24, and 32). In the two cases (Nos. 1 and 16) in which we used 1 per cent. solution, the anaesthesia was incomplete. It was also incomplete in Cases 3 and 15, in which we used 20 c.cm. of 1½ per cent. solution.

D

CASES.

We give a brief account of the most instructive cases:

No. 1 was a girl requiring amputation through forearm. At the first attempt we only obtained patchy anaesthesia, but on a second attempt three days later the anaesthesia was good except that the ulnar nerve was slightly sensitive.

No. 3. In this case anaesthesia was light and patchy, paraesthesia not being definitely obtained before injection was made, the puncture being made too far out in order to avoid the artery. A general anaesthetic had to be given.

No. 4. Sequestrotomy of humerus; the anaesthesia was good, but as the incision extended almost to the acromion process a line of infiltration had to be made to cut off the fibres of the cervical and intercosto-humeral nerves.

No. 8. This man had a marked deformity of the clavicle following a fracture, and owing to the alteration in the relation of the clavicle to the plexus we were unable to strike the latter.

No. 15. In this case we used 1½ per cent. solution. There was anaesthesia of the whole arm, but it was not deep; however, it was sufficient for amputation of contracted fingers.

No. 16. Necrosis of metacarpal; 20 c.cm. of 1 per cent. was injected; anaesthesia of radial side was incomplete.

No. 18. Boy, aged 11. Compound fracture of both bones of forearm; 15 c.cm. of 2 per cent. solution was injected. This was the longest anaesthesia we obtained, being complete eight hours after the injection; in twelve hours sensation was beginning to return.

No. 19. In this case a vein was punctured, but no ill effect resulted beyond a slight swelling in the neck, which only lasted a short time.

No. 22. Male, aged 35. Malunited fracture of radius and ulna. As it was a very difficult fracture to plate, this is the severest test the anaesthesia has been put to by us. The anaesthesia was absolute.

No. 23. Female, aged 50. Dislocation of shoulder. This case is interesting, as it shows the extent of the field of anaesthesia. Before the injection was made the patient was complaining very much of the pain in her shoulder, but about three minutes after the injection she said her arm felt comfortable. On induction by Kocher's method she felt slight pain, which we considered to be intercostal.

No. 24. In this man the plexus was very deep, over 2 in., and we could not get satisfactory paraesthesia; we injected 20 c.cm. and waited thirty minutes, but the anaesthesia was incomplete. This case illustrates the anatomical difficulties likely to arise in some cases and to which the failure must be partially attributed, it also bears out the point that definite paraesthesia must be obtained.

No. 25. Male, aged 38. Wiring fracture of olecranon. The anaesthesia was fairly good, but he was a most unsatisfactory patient; just after the injection was made he had a "hysterical fit." As he was so noisy a whiff of ether had to be given to distract his attention. He said after the operation that he did not feel any pain.

No. 32. Male, aged 28. Reducing Colles's fracture. At first attempt we had difficulty in finding the plexus and anaesthesia was very slight. At a second attempt next day we found that the plexus was much deeper and further out than usual; the anaesthesia was perfect.

No. 35. Boy, aged 16. Colles's fracture. Only 14 c.cm. of 2 per cent. solution were injected. Felt slight pain when the fragments were manipulated.

In our 40 cases we had only four failures—Cases 3, 8, 24, and 32; in the first three of these a general anaesthetic had to be given, in the fourth case complete anaesthesia was obtained at the second attempt. In four other cases the anaesthesia was light or incomplete, but was sufficient to allow of the operation being performed; in these cases a weak solution was used. Thus in 80 per cent. of the cases the anaesthesia was complete, in 10 per cent. it was a failure, and in the other 10 per cent., although the anaesthesia was incomplete, it was sufficient for the operation.

We hope to show in our next series of cases that, with experience, the percentage of failures can be reduced by a considerable margin. However, we admit that a small percentage of failures is bound to arise in consequence of anatomical difficulties that will be met with occasionally.

We are indebted to Dr. Paley, assistant house-surgeon at this hospital, for his valuable suggestions for improvement of the technique, and for kindly permitting us to include in our series the cases done by him, particulars of which he left at our disposal.

REFERENCES.

[1] Hirschel, *Muench. med. Woch.*, 1911, No. 29. [2] Kulenkampff, *Zentralbl. f. Chir.*, 1912, xxxviii, 1337. [3] Borcher, *Zentralbl. f. Chir.*, 1912, xxxix, 873. [4] Bier's clinic. [5] Borcher, ibid. [6] Borcher, ibid.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE TREATMENT OF NEURASTHENIA.

AT the present time one finds that neurasthenia is being treated, on the one hand, by purely psychical means, and on the other by purely physical measures, and it does not appear that the advantage of combining the two classes of remedies in the treatment of this condition is sufficiently realized.

I consider that static electricity is best suited for the purpose in view, and it has been my practice for some time to make use of combined psycho-electrical treatment for treating neurasthenia in the following manner:

The patient is seated in a comfortable reclining chair on an insulated platform connected with the machine. He is requested to assume a position of relaxation and comfort, to close the eyes, and to rest quietly without speaking or making any movements throughout the treatment. The electricity is generated in the usual way, and its actual application may be varied according to particular requirements; but as a general rule the metallic tassel is so arranged as to give a mild head-breeze. Under such conditions the most restless patients will become tranquillized and soothed to an extent that is difficult to obtain by simple suggestion alone. The effect of the electricity is remarkably soothing, and patients find that in this method they are able to relax their muscles and to rest more quietly than without it. The mental state obtained is not one of sleep, neither is it, apparently, a hypnotic state. It is a "rest state" which very often corresponds to the hypnoidal state described by Boris Sidis.[1]

It is my experience that under such conditions the mental state obtained is one of marked suggestibility, and this fact is made use of either to give direct suggestions oneself or to get the patient to give himself such definite self-suggestions as may be advisable. At the same time there is the physical tonic effect of the electricity, which is notably beneficial in all neurasthenic states. In a word, this combined psycho-electrical method enables me to make use of three great principles of nerve treatment —namely, rest, electrotherapy, and suggestion.

I am of opinion that one of the great advantages of static electricity is that it beneficially affects the sympathetic nervous ganglia, with the result that increased peristalsis of stomach and intestines occurs and auto-intoxication is decreased. Where this last-named factor is plainly hindering recovery it is my custom to supplement the psycho-electrical treatment by abdominal massage with a specially designed vibration machine, whilst at the same time prescribing liquid paraffin in suitable doses.

But experience shows that the best results are not obtained unless one combats the morbid mental state also, and so one finds the direct suggestion an essential part of the treatment.

London, W. EDWIN L. ASH.

[1] *Psychotherapeutics*, a Symposium by Morton Prince, M.D., and others (p. 121).

IRON PERCHLORIDE IN RINGWORM OF THE SCALP.

DURING some months at the clinic for minor treatment of school children at Cheltenham I tried various applications for ringworm of the scalp, and found a successful remedy in plain liquor ferri perchloridi fortior (*B.P.*). The results obtained by the free use of this very strong and acid solution of perchloride of iron showed a marked superiority over those obtained with any other application, though several preparations were applied of such strength as to create considerable inflammatory reaction. A distinction must be made between liq. ferri perchlor. and liq. ferri perchlor. fort., as the same results are not obtained with the weaker preparation, which is that commonly prescribed.

The scalp can easily be freed from grease and scurf by the use of motor petrol applied on pledgets of common tow, and the head should have one good wash before the application of the perchloride of iron is begun. As this is very soluble and easily washed away with water, the head should not afterwards be often washed during the treatment.

The strong perchloride solution should be dabbed on the scalp with a camel-hair brush until the scalp is thoroughly stained with it. As the result upon the skin and hair is quite harmless and benign, an occasional prophylactic dressing can be given to the parts unaffected with ringworm. The patches affected should be treated every second day for three times, afterwards every third day for six times, when the cure will generally be effected although the disease has been very extensive. If the head be not then washed, the iron-stained scurf and epidermis will, in the course of some days, come away from the scalp, leaving a healthy skin beneath.

To obtain such rapid and good results as above indicated requires the attendance of the children at a place where the unfailing application of the remedy can be made. It does not appear to be necessary to prevent children going to school whilst undergoing such active treatment, as the cells of the parasite that have been touched with the iron are not likely to be capable of setting up the complaint in another child. By holding the hair aside, part by part, the very fluent liq. ferri perchlor. fort. can be made to stain the scalp thoroughly without cutting the hair, though, of course, it is well to cut the hair close over the affected patches.

J. H. GARRETT, M.D., D.P.H.,
Medical Officer of Health and School Medical Officer, Cheltenham.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

MOBILE EXTERNAL SEMILUNAR CARTILAGE.

(Under the care of Mr. HOWARD DENT, F.R.C.S.)

(Reported by T. D. M. STOUT, F.R.C.S., Resident Surgical Officer.)

THE patient, a young woman aged 22, gave a history of having for two years felt a loose body in the knee which caused a loud clicking sound when the knee was moved. No weakness was noticed in the knee until two weeks before admission, when it felt unstable on going up and down stairs. She had never had any pain, and no synovial fluid or thickening could be detected. On examination the knee was found to move well, and the clicking sound was readily heard and felt. A nodule the size of a cherry-stone was felt between the femur and tibia on the outer side of the knee midway between the patella and fibula. On flexion it disappeared into the joint, on extension it appeared outside joint. There was no tenderness, and the knee was quite stable.

A vertical incision was made over the loose body, and it was found to be the external cartilage compressed antero-posteriorly and only attached at its two extremities, no vestige of coronary ligament being present. The cartilage was removed entire, and perfect recovery took place.

THE Lord Mayor of London, accompanied by the Sheriffs, presided over the seventy-seventh annual meeting of St. Mark's Hospital for Cancer, Fistula, and Other Diseases of the Rectum, City Road, E.C., on February 13th. The report showed that 672 in-patients had been admitted, and 2,031 out-patients had received treatment during 1912, a larger number than previously recorded. The Lord Mayor, who is President of the hospital, said that the hospital admittedly laboured under certain disadvantages in its efforts to secure funds, but that generous help ought to be forthcoming when it was remembered how successfully it dealt with most painful and distressing forms of disease.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, January 31st, 1913.

Dr. J. O'CARROLL, President, in the Chair.

A Case of Polycythaemia.

DR. O'CARROLL showed a man, aged 57, the subject of this disease. He was a scavenger, of middle height, distinctly stout, and alcoholic. He was admitted into hospital on November 28th very cyanotic, with dyspnoea and slight mental confusion; there had been oedema of the feet for a month, and there was cough and expectoration. Physical examination showed little except that the cyanosis was present over the body, that there was a trace of albumen in the urine, and that there was a moderate effusion in the right pleural cavity. But for his extraordinary assurance that he was quite well, he looked as if he had not an hour to live. About 40 oz. of clear fluid were withdrawn from the right pleura, and he was kept under almost continuous inhalation of oxygen. Next day no very marked alleviation in his appearance or symptoms having occurred, 10 oz. of blood were withdrawn from the basilic vein, and the administration of oxygen was continued. On his fourth day in hospital a blood count showed 7,500,000 red cells per cubic millimetre with haemoglobin 105 per cent. Ten ounces of hypertonic saline solution were injected into the pectoral region, and the oxygen was continued. He was again wandering in mind and unconscious of his surroundings. Two days later he was again bled to the amount of 10 oz., oxygen being continued. Next day a little over 40 oz. of clear fluid were taken from the right pleural cavity. An exploratory puncture of the abdomen gave no result. A blood count on December 5th gave 3,800,000 red and 7,000 white cells, and haemoglobin about normal. No abnormal forms were found. He was quite reasonable and apparently comfortable. On December 7th oxygen was discontinued. Thirty-six hours later a blood count gave about 7,000,000 red cells. Thirty-five ounces were withdrawn from right side of chest. He was again oxygenated for three days, and the red cells fell to 3,500,000. On December 13th 50 oz. were taken from the right pleura. On December 16th a blood count showed 7,450,000 red cells; on the 19th 9,250,000; on the 31st 6,250,000; on January 15th of this year 5,500,000; on January 22nd 6,500,000. One examination of the specific gravity of the blood showed that it was distinctly above normal. On January 16th an *x*-ray examination by Dr. Watson showed apparent dilatation of the aortic arch appreciable both to right and left of the sternum. There was no abnormality of the pupils, no aphonia, no tracheal tugging, no pain, no disparity in the radial pulses, and no sign of undue rigidity of the arteries. He has been up and about for the past month; shows no distress or dyspnoea, but looks as if he were again becoming unduly plethoric. Dr. MOORHEAD said he was struck with the variation in the number of red cells in proportion to want of oxygen. He did not regard polycythaemia as any explanation of the symptoms, but was inclined to look on it only as itself a symptom. Dr. O'KELLY and Dr. CROFTON also spoke.

Early Tabes Dorsalis.

Dr. T. GILLMAN MOORHEAD exhibited a typical case of tabes dorsalis occurring in early life. The patient, a girl aged 23, recently came under his care with typical symptoms and signs of that disease. Wassermann's test was fully positive, and became negative after salvarsan had been administered without any improvement in the symptoms. There was some girdle pain since the injection. He invited suggestions as to the advisability of further injections of salvarsan. There was no history of acquired disease or congenital taint. Dr. O'KELLY had not seen any bad results from the repeated use of small doses of salvarsan in locomotor ataxy. Girdle pains frequently followed the administration of salvarsan, possibly because an inflammatory reaction was set up by the setting free of the spirochaete. Dr. CROFTON referred to a case of keratitis in which spinal symptoms developed after the second dose of salvarsan, but cleared up after the third. He related a severe case of tabes where the symptoms almost disappeared after a course of sulphur baths. The PRESIDENT asked for experience of intervenous injections of mercury. He thought it would be worth trying in cases where there was any doubt about the use of salvarsan. There was no evidence that a large dose of mercury had very much effect on the nerve centres, and it might have a destructive effect on the spirochaete. Dr. MOORHEAD, in replying, said he did not think that repeated doses of salvarsan were of much use, and he had come to the conclusion that doses of 0.1 gram were entirely useless. He noticed that the tendency now with regard to the administration of salvarsan was towards larger doses. He was contemplating a further dose of 0.4 gram for this patient, and she was anxious to have it.

Foot and Mouth Disease in Man—Aphthous Fever.

Dr. C. M. O'BRIEN read a paper on this subject. A veterinary inspector, aged 35, was bitten last summer by a sheep on the forefinger of the left hand. He applied an antiseptic dressing to the wounded finger, and continued his daily examinations. Three weeks later an abscess developed, and was opened with every antiseptic precaution. No pus escaped, and the wound refused to heal. Over a month after the finger was bitten, redness and swelling appeared on both hands, accompanied by itching of the parts, with a few small, raised, white swellings like little lumps under the skin, especially in the clefts of the fingers. By night time there was slight itching of the upper part of both feet, with a prickly sensation in both soles, becoming worse on walking. The patient complained of malaise for a day or two previously. He then consulted Dr. O'Brien, who found that he had always enjoyed excellent health excepting for an attack of scarlet fever which he contracted at the age of 10. The fingers and dorsal aspect of both hands were markedly swollen and covered with a dull reddish, raised rash, extending to an inch above both wrists; it caused itching. Vesicles in process of formation were observable here and there over the surface of the rash, especially between the fingers and round the nails. The wound on the injured finger gaped, but no pus issued from it. There was no perceptible involvement of the lymphatic glands. A few vesicles were observable on the fauces, on the inside of the lips, on the gums, and the side of the tongue which was swollen and somewhat tender. Speech, deglutition, and mastication were painful, and the saliva was copious. The temperature never exceeded 100°. There was no evidence of any visceral complication. The next day all the symptoms increased and saliva trickled from the mouth. Ruptured vesicles on the fauces now formed small shallow ulcers, with dark red bases. The patient made an uninterrupted recovery, and resumed professional duty within two months. Dr. O'Brien in his paper dealt very fully with the literature of foot and mouth disease in man from the first recorded case in 1695 down to the present day. Professor METTAM said that the incidence of the disease was much greater on the Continent, especially in Russia and France, than in these islands. In one instance the disease was produced in a calf by inoculation with the pus taken from a vesicle on a boy. In 1880 there was a large outbreak amongst persons in Dover who had consumed the milk of cows suffering from foot and mouth disease, and at the time it was noticed that the incidence of the disease was greater amongst those who had used the cream. Diagnosis of this disease was difficult, as the germ was not known. A 300th part of a cubic centimetre of the pus taken from a vesicle was capable of setting up a lesion in cattle, in which there was little difficulty in diagnosis. Lesions often occurred in the mammary gland, and it was probably in this way that the infection was carried to the milk. In the case just reported the period of incubation seemed long, as in the lower animals it was generally from two to four days. As soon as the vesicles ruptured the temperature went down and the lesions rapidly healed. Within a week or so there was an epithelial covering to the corium, and as soon as this took place infection had passed.

ROYAL SOCIETY OF MEDICINE.

Pathological Section.

Tuesday, February 18th, 1913.

Professor R. T. Hewlett, President, in the Chair.

Differentiation of Streptococci.

Dr. H. W. Crowe read a paper in which he advocated the culture of streptococci on neutral red Dorset egg medium as a means of differentiation. In the case of some streptococci the colonies were yellow, in others red, in others plum-coloured. Their forms also varied, the three most characteristic being like a cottage loaf in miniature, or a clerical hat, or a draughtsman. The last-named form was a character of *Streptococcus pyogenes*, and that of the streptococcus of erysipelas was the same. In rare cases a streptococcus would indent the egg medium. Checking the diagnosis by means of the various sugar fermentations, the groups that were differentiated by the coloration and shape of their colonies corresponded with the groups made by Andrewes and Gordon—streptococci of the mouth, lung, intestine, connective tissue.

Obliterative Cholangitis with Duct Dilatation.

Dr. A. Hall recounted the case of a girl, aged 15, who since the age of 7 years had been subject to intermittent attacks of pain and jaundice, and who ultimately died of toxaemia accompanied with haemorrhages. After death the ductus communis was found extremely narrow and fibrosed; there was an adventitious duct opening into the gall bladder, apart from the cystic duct. The author was unable to explain the cause of the inflammatory obstruction, which had been followed by marked dilatation of the bile ducts in the hilus of the organ. The recurrent attacks of pain he thought due to intermittent obstruction.

Occlusion of the Inferior Vena Cava as a Result of Internal Trauma.

Mr. S. G. Shattock's communication upon this is given *in extenso* on page 385.

Section of Surgery.

Tuesday, February 11th, 1913.

G. H. Makins, C.B., F.R.C.S., President, in the Chair.

Gastro-enterostomy.

Dr. Arthur F. Hertz read a paper on the cause and treatment of certain unfavourable after-effects of this operation. The opening was sometimes made too large, so that the stomach contents passed at once into the jejunum and distended it. *X* rays showed that food only remained in the stomach for from a quarter of an hour to an hour instead of for three hours; indeed, the rate of outflow sometimes almost equalled that of the oesophagus. The stomach became small and hypotonic. The distended jejunum gave rise to sensations of fullness and discomfort after meals, which were referred to a lower area than those produced by the original condition. The unchanged food irritated the small intestine, causing diarrhoea. Contrary to what was observed in cases of gastro-jejunal ulcer, it was the quantity, not the quality, of the food that produced the symptoms. If the patient ate slowly, lay down after each meal, and took pancreatic ferment, belladonna, or cocaine half an hour later, the symptoms would not develop. If it were found necessary the stoma should be made smaller. The stoma should be placed at the most dependent part of the stomach, a point sometimes difficult to determine owing to the alteration in the situation of the great curvature of the stomach in the erect and supine positions. If the stoma were placed too high, it was a mechanical impossibility for the stomach to drain through the opening until the food collected and reached its level. The condition was relieved by lying down and by compression of the abdomen. Mr. Warren Low said that up till now the sense of fullness and diarrhoea after gastro-enterostomy had been ascribed to a slight recurrence of the original malady. The results obtained in cases of dilated stomachs and duodenal kinks were deplorable. Sir Frederic Eve thought that the results of the operation, when performed for duodenal ulcer with a patent pylorus, were bad. In gastroptosis he had obtained good results by stitching up the gastro-hepatic omentum and attaching the lesser curvature to the diaphragm. Dr. Russell was sure that the results from gastro-enterostomy were on the whole very satisfactory, as so few cases returned for treatment. Mr. Sidney Boyd advocated a vertical opening, as most likely to ensure permanent success. The President said that gastro-enterostomy was not a cure for gastric ulcer, and thought that the apparent good results obtained by operation in cases of duodenal ulcer were due to the long relief from symptoms often gained by a month's rest in bed. Dr. Hertz replied that the percentage of absolute success was small. The hypotonic stomach was the most favourable for this operation, but he did not advise gastro-enterostomy for gastroptosis. He had found that in those cases in which the stomach had been fastened up to the diaphragm recurrence took place in a very short time and the stomach got back to its old position.

Effects of Treatment on Gastric and Duodenal Ulcers.

Mr. Edred M. Corner read a paper on this subject. From his own 40 cases and the statistics of other observers he came to the conclusion that it was better to wait, and, if necessary, do a gastro-enterostomy later. In the majority of instances it was not required, though many cases of pyloric and duodenal ulcer were benefited by it. When the opening of a gastro-enterostomy was placed laterally very little of the food could be expected to drain through it. Owing to the friable condition of the tissues it was often difficult to close the opening directly. When this difficulty presented itself he used a portion of omentum to close the opening or packed the ulcer with gauze and drained it. This last method, he believed, would become more popular in the future, as it saved time.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

At a meeting on February 14th, at which the President (Professor E. W. Hope) was in the chair, Dr. J. W. Mason read a paper on *Duties imposed upon port sanitary authorities.* By the adoption of improved systems of administration based on enlightened principles of sanitary science, great changes in our national system had been brought about. Quarantine was now in oblivion, and the abandonment of its restrictions had been a most powerful stimulant in the cause of sanitation. The medical inspection and examination of the passengers and crews of all vessels arriving from infected or suspected ports, which had replaced quarantine, was of national importance, as only by this means could the importation of infectious and other diseases be prevented. Inquiries were made as to illness, removal to hospital, or death from infectious disease of any member of the crew, and as to the prevalence and mortality amongst rats, especially having regard to the measures to be taken to prevent the spread of the plague. Bills of health were also examined. It would be a great advantage if bills of health were made out in one universal language, such as Esperanto. The confidential lists recently issued by the Local Government Board at periodical intervals setting forth the existence of infectious disease at various foreign ports had proved to be invaluable to the medical officers of health to whom they were sent. A port sanitary authority could require the cleansing and disinfection of any ship or articles in it likely to retain infection. In Hull a ship's crew was often removed to the disinfecting station to undergo bathing and disinfection, their quarters and other parts of the ship meanwhile being disinfected. The clothing and effects of deceased seamen should be disinfected before being handed over to the Board of Trade. A very necessary precaution was the pumping-out of all bilge water and water ballast from an infected or suspected vessel before it entered dock, and samples of the water of all ships should be regularly examined both bacteriologically and chemically. The regulation of the examination of foodstuffs imported from foreign countries was an important duty cast upon port sanitary authorities, although a vast proportion of the food examined was sent inland—a sufficient reason for the payment by the Treasury of the expenditure involved, instead of out of the local rates, as at present is the case. The President agreed

that it would be a distinct advantage to have bills of health in one language, preferring French to Esperanto. He thought it was not sufficiently realized that the immunity the country had had from small-pox was due in great measure to the care taken by the port sanitary authorities, for the disease did not now often pass the ports as it did formerly. He regretted that agreements which had been come to at international conventions were not more rigidly adhered to, and stated that on occasion our own ships had been subjected to disabilities which were altogether unwarranted. Dr. HERBERT WILLIAMS was of opinion that bills of health should be in French. He thought that the information obtained from British consuls abroad was not of much value, and suggested that the Government should insist upon more efficient information being secured. He referred to the difficulties attending the destruction of rats, whose ingenuity enabled them to overcome almost any obstacles placed in their way in getting ashore. Recently the fumes from ship's funnels had been used for fumigating a rat-infested ship, but unfortunately they did not destroy the fleas. Mr. GEORGE BRIGGS, the Chairman of the Port of London Sanitary Committee, stated that the charges in connexion with the port sanitary authority of London, amounting to £12,000 annually, were all paid for out of the private funds of the Corporation, and did not come out of the rates. Mr. HERBERT JONES, Dr. H. K. ROBINSON, and Dr. TUBB THOMAS also took part in the discussion.

UNITED SERVICES MEDICAL SOCIETY.

AT a meeting of this society, held at the Royal Army Medical College on Wednesday, February 12th, the President, Fleet Surgeon BASSETT SMITH, C.B., R.N., in the chair, a paper was read on *Regimental and field ambulance training* by Major J. OLDFIELD, R.A.M.C.(T.). Discussing the training of medical officers attached to combatant units in the Territorial Force, Major Oldfield drew a comparison between these officers and the medical officers of field ambulances, pointing out that the former, after completing their first training camp or course of instruction, might remain for years on the strength and yet never do a single duty for the battalion or come into contact with any of its officers or men. Even the maximum of a fortnight every two years in contact with their men and their work could not be considered at all sufficient to enable officers to keep in real touch with their duties. The case of the field ambulance officer was very different. He was obliged to attend camp at least once in three years, and this was emphatically laid down as the minimum. This matter was important, as an efficient camp training was the only real way in which a medical officer could be fitted for active service duties. A regimental medical officer was encouraged not to attend camp *more* often than once in every two years, whereas the obligation was laid upon the field ambulance officer to attend camp not *less* than once in three years. No doubt the intention was to lighten the duties of busy practitioners willing to join the Territorial Force by providing a regiment with two medical officers attending training in alternate years; but the event had proved that it was easier to get the same class of busy men to go into camp year after year for the full fortnight in field ambulance than to gain the full complement of regimental officers for camp duty every second year. The mere fact, therefore, of "making it easy" was not an inducement which attracted men to join the Territorial Force. What were the duties that a regimental medical officer was expected to perform? It was often most fallaciously supposed that a regimental doctor's only duties were to attend to the sick of his unit in times of peace and to look after the wounded during battle. The truth, however, was very different. It was intended that he should be the commanding officer's right hand man in all matters affecting the health of the troops or prevention of disease amongst them. He was responsible for the custody and use of medical and surgical stores, and for the training and duties of the R.A.M.C. men attached to the unit. He had to examine recruits in camp, see the sick, and be ready to deal with infectious cases and accidents, according to the routine laid down in regulations. He had also to familiarize himself with his duties in action and to train the bandsmen in bearer drill and first aid. All these duties were very important, and it was hard to imagine how they were to be thoroughly performed by an officer to whom no incentive was held out to put in more than the minimum of training laid down in regulations. Major Oldfield recounted his own experiences of both regimental and field ambulance work, and described the increased efficiency with which he performed regimental duty during a temporary return to it, after having served in a medical unit. He suggested (1) that the one portal of entry into the medical service of the Territorial Force should be the field ambulance. (2) That from the field ambulances officers should volunteer for regimental duty not earlier than the close of their first year's training and fifteen days' camp. (3) That a regimental medical officer should not be debarred from an annual camp, but rather encouraged to attend it. Where there were two medical officers in a battalion one should be attached to a field ambulance for his camp and the other trained with his regiment. (4) That every medical officer should train one year in three with a field ambulance in camp. (5) That the annual training as to drills, riding, etc., should apply to all R.A.M.C.(T.) officers. When they lived at a distance from drill halls, travelling expenses should be allowed. (6) That brevet rank should sometimes be conferred on officers showing zeal and ability, coupled with any special excellence, as an incentive to effort. The following officers took part in the discussion: Colonel HARPER, A.M.S.(T.), Lieutenant-Colonel SALISBURY SHARP, R.A.M.C.(T.), and Major WAGGETT, R.A.M.C.(T.), Lieutenant-Colonel BURTCHAELL, Major CUMMINS, Major IRVINE, and Captain GRANT of the R.A.M.C. Major OLDFIELD replied.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on February 6th, Mr. ROBERT JONES, President, in the chair, Mr. F. A. G. JEANS read a note on *One of the functions of the caecum*. He had removed the caecum in rabbits and found that fluid faeces were passed, instead of the usual hard motions. The practical application deduced was that rectal salines should be large in quantity, as relatively more fluid was absorbed from the right half of the colon than from the left. In bad cases of peritonitis fluid might be injected with advantage directly into the caecum or through the stump of the appendix. Mr. F. T. PAUL did not think the appendix could be used in cases where it had been found gangrenous, but tubes might be inserted directly into the large bowel. Mr. THELWALL THOMAS thought saline injections might be given through a rubber tube fixed in an appendix stump, and would so obviate one of the difficulties of rectal injection, which had the disadvantage of requiring the patient to be propped up. Mr. HUGH SHAW thought the appendix and caecum might, from the relative amount of lymphoid tissue they contained, have a protective function as well as absorptive. Mr. JEANS replied. Dr. STOOKES read a note on *Puerperal mortality in Liverpool*. It had for years been lower than the average of England and Wales, in spite of so large a poor population. In 1911 74 per cent. of all births in Liverpool were attended by women, and there was a mortality from sepsis of 0.59 per 1,000 births; whilst 26 per cent. of births were attended by doctors, and the mortality from sepsis was 1.8 per 1,000 births. In the past six years doctors' cases diminished steadily in number, and during that time their sepsis mortality was nearly twice as great as many cases attended by midwives. Liverpool had trained midwives for nearly fifty years, long before the Midwives Act. Dr. Stookes concluded that where midwives were well trained, worked under supervision, and could fall back on skilled help, they did the work on the whole better than a badly paid general medical practitioner who was busy with other cases, often septic in nature. Dr. MUSSEN (assistant medical officer of health for Liverpool) said the satisfactory state of the Liverpool puerperal mortality had been largely due to the Liverpool Ladies' Charity, which had trained midwives, so that while England and Wales had some 20 per cent. of the women trained and certificated, Liverpool had only 20 per cent. untrained. Practically all cases were now attended by women who possessed a

certificate. There had only been one outbreak of puerperal fever in Liverpool in the practice of any one midwife since the Health Department undertook their supervision. Cases occurred usually as single cases, a few in groups of two. Each midwife was interviewed on the notification of a septic case, and her methods inquired into. Dr. HARVEY and others who took part in the discussion reminded the meeting that practically all cases which doctors attended were instrumental. Dr. R. J. M. BUCHANAN read a paper on *Tumours of the spinal cord*, and described with lantern slides four cases where the tumour was psammoma, sarcoma, hydatid, and cancer secondary to carcinoma uteri which had been removed three years previously. Dr. Buchanan appealed for early operation in such cases, and showed how in his own cases the tumour was accurately located and easily removed, with satisfactory results. Mr. DOUGLAS-CRAWFORD described two successful cases, and agreed that operation should be done if only for the relief of root pain. Dr. WARRINGTON said that tumours causing no pain gave rise to difficulty. Mr. THELWALL THOMAS deprecated delay, as improvement could not be expected when the cord had been long compressed. He thought that there was no more danger in exploring the spinal canal than any other cavity of the body. Dr. BUCHANAN replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this society was held on February 14th, the PRESIDENT (Dr. Dobson) in the chair. Mr. H. COLLINSON read a paper on the *Importance of early diagnosis and treatment in acute perforating duodenal ulcer*. Mortality in operated cases was directly proportionate to the number of hours which had elapsed between the occurrence of perforation and operation. In 27 cases upon which he had operated during the last three years the mortality was 41 per cent. Of these, 10 were operated on within twelve hours, with a mortality of 10 per cent.; 10 cases operated on in the second twelve hours gave a mortality of 40 per cent.; and in 7 operated on after twenty-four hours had elapsed the mortality rate was 86 per cent. Matters of operative detail were discussed, and it was shown that the performance of an immediate gastro-enterostomy was not necessary for the recovery of the patient, and consequently should be reserved for those cases in which operation was undertaken very soon after perforation had occurred. Dr. WARDROP GRIFFITH brought forward a case of *Disseminated sclerosis*. The first symptom, noticed last October, was squint with diplopia, due to paresis of the abducens nerve, but it had to a great extent passed off. Marked weakness of one arm, and then of the opposite leg, soon came on in succession, but considerably diminished. There was no intention tremor nor staccato speech, but, though there had been great improvement, the diagnosis was confidently affirmed on the great increase of the knee-jerk, on the Babinski phenomenon, on the presence of slight nystagmus on lateral movement, and on incipient atrophy of the optic nerve. Dr. VINING showed a case of *Pressure on the main bronchus of the left lung by a malignant growth*. The patient was a man aged 54, who had suffered with cough and breathlessness for two years, and who twice suffered from haemoptysis. The physical signs were, greatly diminished expansion with reduced air entry over the whole of the left chest. *X* rays showed no evidence of growth or aneurysm. There were no tubercle bacilli in the sputum. Cases were also shown by Mr. L. R. BRAITHWAITE, Dr. M. J. STEWART, Mr. E. W. BAIN, Mr. J. F. DOBSON, Dr. BRONNER, Mr. ROWDEN, Dr. OLDFIELD, Mr. LAWFORD KNAGGS, Mr. ALEXANDER SHARP, Dr. R. A. VEALE, and Dr. WATSON.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT the mid-session meeting, the PRESIDENT (Mr. W. G. Laws) in the chair, the mid-session address on *Some remediable defects in children of school age* was delivered by Miss MARY THORNE, M.D., F.R.C.S.I. Medical inspection, carried on in schools for ten years, had shown that healthy bodies and healthy minds could only come from healthy parents and healthy surroundings. In order to secure attention to the daily functions of the body, there should be sufficient and decent lavatory accommodation in every school, and children should be allowed to leave the class if necessary, for if these functions were neglected, constipation followed by anaemia, indigestion, and dysmenorrhoea inevitably occurred. Fortunately, there was a steady improvement in the lavatory accommodation. All girls should have plenty of active movement in the open air, but not in competitive games, which were harmful for them between the ages of 13 and 16 years. Curiously enough, town children had better playgrounds than village children. The lecturer spoke of posture curves, flat feet, desk accommodation, and the position of the windows in the class-room. The light should always come over the left shoulder. The teeth were too often neglected; all second dentition teeth should be stopped on the first signs of decay. The children should clean their teeth at least every night. The importance of clean heads was being instilled into the parents, because they found that the children were refused by the factory surgeons if their heads were verminous. A very large number of blind and deaf children owed their afflictions to the sins of their parents. Heredity was also the largest factor in the causation of mental deficiency. Thus it became the duty of doctors to impress upon parents, teachers, and clergy, etc., the great importance from a medical point of view of encouraging a moral life. Finally, the lecturer deplored the present system of class teaching as opposed to individual teaching; 5 per cent. of the children left school without being able to read and write sufficiently for any practical purposes. There should be a simpler code of instruction; little should be taught, but that little should be well taught.

THE annual dinner of the West London Medico-Chirurgical Society was held at the Hotel Great Central on February 6th, under the chairmanship of Dr. G. P. Shuter, president of the society. After the loyal toasts had been duly honoured, Mr. Richard Lake proposed "The Imperial Forces," and in the course of his remarks spoke of the necessity for universal service, and referred to the periodical instruction given to medical officers in order to keep them up to date with the latest improvements in their profession. Surgeon-General Sir Launcelot Gubbins, Director-General, A.M.S., in acknowledging the toast, mentioned the important part the Colonies were playing in the defence of the empire. He was glad to say that whenever any officers were required for special duty, either under the Foreign Office, Colonial Office, or the Red Cross Society, the medical service of the army was able to meet the demand. Officers had been sent out with the Red Cross Society to the seat of war; the reports received showed that the Servian medical service was the best of those of the armies engaged. Of the Territorial Force he said that if the remainder of the force was half as efficient as the medical section there would not be much to complain of. The Voluntary Aid Detachments, though started only about three years ago, contained 57,000 members, of whom about two-thirds were women. In proposing the toast of "The West London Medico-Chirurgical Society," the Chairman said that the society now contained over 580 members, 33 of whom were original members. The attendances at the ordinary meetings averaged 44. The next Cavendish lecture was to be delivered in June by Sir Berkeley Moynihan. He was afraid he saw trouble ahead for the society, since, owing to the introduction of the Insurance Act, there would be a division of the members into two classes—those who were on the panel and those who were not, similar to what had occurred in Germany through the German Insurance Act. The toast was responded to by Dr. S. D. Clippingdale, who referred to the foundation of the society in 1882 by Mr. C. R. B. Keetley. As a sign of growing interest in the work of the society he contrasted the first volume of its *Transactions*, which consisted of only 86 pages, with the last volume, which contained 356 pages. Dr. F. S. Palmer gave the toast of "Kindred Societies and Guests," which was acknowledged by Sir Francis H. Champneys, President of the Royal Society of Medicine. Mr. McAdam Eccles proposed the toast of "The Chairman," which was duly acknowledged. The toast of "The Officers of the Society," coupled with the names of Mr. Bishop Harman and Dr. Warren, proposed by the Chairman, and acknowledged by Mr. Harman, brought the function to a close.

Reviews.

COLOUR VISION AND COLOUR BLINDNESS.

Researches in Colour Vision,[1] by Sir WILLIAM DE W. ABNEY, is a large and attractive looking book which, the author states, has been written "to show that the trichromatic theory of colour vision does not yet require a funeral service over its remains." On seeing this statement the reader naturally imagines that proof of the theory will be adduced, and that full answers will be given to the criticisms which have been levelled against it by many workers. Much to our disappointment, however, we have been unable to find an answer to a single one of the objections which have carried conviction to many minds and have led many workers in other countries as well as in this to give it up as untenable, on the ground that it affords no explanation of the defect of hue perception, which is the characteristic of colour blindness. This is not the only remarkable feature in the book. Any one who has followed the controversy which has gone on for years about colour vision must be well aware of the work done by Edridge-Green and others who have followed his teaching to show that the trichromatic theory is untenable; yet in this book his name is never mentioned. Nevertheless, tests now recommended by Sir William Abney would seem to be identical in principle with those which Edridge-Green has for so long been advocating.

It is most interesting to compare the present book with those previously published by Sir William Abney. He seems entirely to have abandoned many of the methods he used to advocate and gradually to have evolved others which are not easy to distinguish from those which his opponent has for the last twenty-five years been struggling to get recognized. Dr. Edridge-Green has always stated that the naming of colours in a test is essential, that coloured lights should be used instead of coloured wools, and that matching alone was a most imperfect method of testing for colour blindness. We believe we are right in stating that all these propositions have been strenuously denied at one time or another by Sir William Abney, yet in the book under review many of the tests advocated depend upon the naming of colours. To the Holmgren test he has added two colours similar to those used in the Edridge-Green classification test, and he states that "after an examination has been made, if the examinee is asked to name some of the colours, the giving of a wrong name to any of them will confirm what has probably been found out by the matches." The significance of the word "probably" is very apparent to any one who has had much experience in testing for colour blindness, but a more thorough change of front could hardly have been made; how this has come about might have been explained. To pass over the reasons for the change can scarcely be considered adequate treatment. The author next describes a test by painting similar to that given by Edridge-Green, in which the examinee is asked to name the faint washes of colour. A test by coloured discs is given which has been shown to fail to detect the colour blind. The spectrum test seems for all practical purposes to be identical with the spectrometer of Edridge-Green; so also is the dot and lantern test. A test by simultaneous contrast is described, and unless the reader recognized it he would be unaware that the test described was used by the same worker long ago. The final test is a quantitative one based on the trichromatic theory. This test has been most severely criticized, as it has been found that many colour blind people tested by it appear to be normal, and many normal people colour blind.

It would certainly have been more generous if Sir William Abney had acknowledged the fact that he had given up much which he had previously advocated in his published works and had wheeled into line with what his chief opponent had advocated years ago.

TUMOURS.

DR. A. E. HERTZLER'S *Treatise on Tumours*[2] is not a record of the author's experience but merely an attempt to combine an account of the clinical aspect of tumours with a description of routine pathological diagnosis. It is by no means such a complete work as its title might suggest. The results obtained by the work of the experimental oncologists have been by design entirely omitted. There are no details of surgical technique apart from a few diagrams and brief indications as to the methods advised by the author.

The first section is devoted to a sketch on the general biology of tumours, whilst the second deals with the special pathology of tumours. Both give a clear account of the subject, but are rather elementary. The teaching is dogmatic, and therefore might be criticized in detail; but all short and dogmatic expositions of these subjects are open to this objection. Little space is devoted to the relation of tumours to embryological development. It is interesting to find that the author is opposed to the routine removal of small pieces of tumour for pathological diagnosis unless radical operation is to follow immediately, holding such practice to favour dissemination. There is no mention of chloroma or of arsenic cancer of the skin.

The third section of the book is devoted to a regional consideration of tumours. It is very unequal, and there is a great lack of proportion. The chapters dealing with the breast, stomach, intestine, and the ovary are satisfactory. The clinical discussion of intracranial tumours is very weak, as is that of intrathoracic tumours. As an illustration of the lack of proportion may be mentioned the fact that tumours of the thyroid are dismissed in one hundred and twelve lines, whilst tumours of the carotid body receive almost the same amount of letterpress. Again, carcinoma of the vulva is dismissed in five lines, whilst four pages are devoted to the rare condition of esthiomene. Twelve lines of letterpress serve for the discussion of developmental tumours of the back. Splenic tumours seem to have escaped mention.

Generally it may be said that the author's teaching is good; it shows plenty of common sense and an almost complete absence of fads. The book is well bound and printed. The illustrations are multiplied beyond the wants of any professional reader, be he practitioner or student. Who wants four illustrations of lipomata of the neck or eleven of rodent ulcer of the face? The histological illustrations are also plentiful, but are not very good. No details of magnification, source of the material, or different structures illustrated are given below the pictures. In fact, the superfluous illustrations have extended what would have made a good student's manual into an expensive monograph which is beyond the means of the average student.

TEXTBOOKS OF PATHOLOGY.

IN bringing out their *Textbook of Pathology for Students of Medicine*[3] Professor ADAMI and Dr. MCCRAE invite comparison with Professor Adami's larger work (*The Principles of Pathology*) which has been published in two volumes, the first appearing in 1909 and the second, written in collaboration with Professor Nicholls, in 1910. As these two bulky volumes cover more ground than the average medical student can be expected to master, this shorter treatise has been prepared to meet his needs. Like the larger work, the present volume lays main emphasis upon the study of underlying principles; it is not intended as a cram book, but as one which shall enable the student to think for himself. "It is not the number of unit bricks that is of importance so much as a knowledge of the principles of construction." To be brief, we have endeavoured first and foremost to make clear and intelligible what is known concerning the deeper meaning of morbid states, and have not hesitated to sacrifice lists of data and their names." With this view as to the proper method of teaching pathology we are to a large extent in agreement; and we particularly approve of the authors' method of constantly bringing the student back to physiology, and making him realize that processes of

[1] *Researches in Colour Vision and the Trichromatic Theory*. By Sir William de W. Abney, K.C.B., D.Sc., D.C.L., F.R.S. London: Longmans, Green and Co. 1913. (Med. 8vo, pp. 428; plates 5. 21s. net.)

[2] *A Treatise on Tumours*. By Arthur E. Hertzler, Professor of Surgery in the University of Kansas. London: J. and A. Churchill. 1912. (Imp. 8vo, pp. 736; figs. 538, plates 8. 30s. net.)

[3] *A Textbook of Pathology for Students of Medicine*. By J. George Adami, M.A., M.D., F.R.S., and John McCrae, M.D., M.R.C.P. London: Macmillan and Co. 1912. (Med. 8vo, pp. 759, with 304 engravings and 11 coloured plates. 25s. net.)

disease can only be understood when interpreted in the light of what is known about normal development and normal functions. At the same time attention should be called to a possible danger, doubtless foreseen by the authors, against which it is well to guard. Existing knowledge of pathology is built up by sound induction from accumulations of observed facts. The student must never be allowed to forget that the facts come before the theories, and it is an essential part of his scientific training that he should learn to observe facts accurately, irrespective of the particular theories or principles which may or may not serve to explain them. Just as in the wards he is taught to make a full clinical record of his cases before he attempts diagnosis, so in the pathological laboratory he must first be trained to see all that there is to be seen; not until he has acquired this power can he be trusted to sift essentials from unessentials and to co-ordinate his facts in the light of general principles. In emphasizing the importance of theory regard must be paid to differences in the temperaments of students; with some there is a danger that a habit of *a priori* generalization may be formed, and that this will conduce to slipshod observation. All students will welcome the authors' gifts of clear exposition, and will appreciate their happy knack of enlightening a difficult point by a homely phrase or an apt simile from everyday life. But they may consider that scant tribute to their intelligence is paid in the elementary platitudes which crop up occasionally. Here is an example from the chapter on the urinary system: "The bladder is specially concerned in regulating the function of urination. Were it not for the bladder, the urine would be continually escaping; but it acts as a reservoir and at the proper time a mechanism for evacuation." And again: "Incontinence of urine is the inability to retain it in the bladder." The candidate for a medical qualification who wrote wisdom such as this in his examination papers would not be likely to make a favourable impression upon his examiners. But these are only minor blemishes. If the writers would, as they easily might, cut out the platitudes, curb their desire to expatiate upon their own theories, and fill in the omissions with some of those "lists of data" which they "have not hesitated to sacrifice," their book would take the place it ought to occupy amongst the works best calculated to teach the student of pathology what he ought to know and how he ought to expand his knowledge with the experience which he will gain as a practitioner.

Professor HEWLETT'S *General and Special Pathology*[4] has now reached a third edition, in which the text has been completely revised, though the general arrangement of the book remains as before. Writing for medical students who have only a comparatively short time to devote to the study of pathology, the author does not attempt to treat his subject exhaustively, but he succeeds remarkably well in setting out a great deal of valuable matter in a concise and attractive form. There is no "padding" in his book; he comes straight to the facts of essential importance, and limits himself to these, but, though he writes concisely, he never lapses into the tedium of a cut and dried epitome. The section on the etiology of neoplasms may be selected as an example of Professor Hewlett's skill as a teacher. The clear outline of the older theories and the excellent summary of recent cancer research are just what the student needs in order to obtain a firm grasp of this highly complicated and controversial subject. The difficult subject of immunity is also very well handled, and in the brief but very instructive account of epidemic poliomyelitis we are glad to see that due importance is given to the experimental researches of Flexner and others. Here, as elsewhere, it is evident that the author has spared no pains to bring his work up to date.

MUSCULAR SPASM AND DEGENERATION AS AN EARLY INDICATION OF CONSUMPTION.

A FRESH stimulus has been given to the study of the early diagnosis of consumption during the last few years by the observations of Dr. F. M. POTTENGER in America and by other workers on the Continent with respect to the behaviour of the chest muscles which are in immediate relation with the apices of the lungs. The views of the former have now been published in this country in the form of a handsomely prepared volume,[5] well illustrated and not too long. Briefly stated, the thesis he maintains is that muscles or groups of muscles obtaining their nerve supply from the same segment of the cord which receives the afferent nerves coming from the affected part of the lung are themselves put into a state of irritation and varying degrees of spasm, and that a process of degeneration may affect such muscles thereafter, causing them to become flabby and wasted. It will be seen that this theory owes its existence to the observations of Dr. Henry Head upon sensory nerves in relation to visceral disease. If the sensory nerves are affected, why not also those supplying the muscles? The early impairment of movement of an acutely affected apex is a matter of common experience, as is the subsequent flattening and immobility when disease has progressed and set up gross lesions. But it is now claimed that the first manifestations of disease may be demonstrated by skilled palpation and trained inspection. Irritability of the muscles about the affected apex is to be detected long before the internal lesion has advanced far enough to produce coarser signs. Skill in the detection of minor variations by palpation and percussion is notoriously wanting in some individuals, while in others the erudite tact seems to be abnormally developed.

It must be assumed that Dr. Pottenger belongs to the latter class of clinical observers; at any rate, he is able to refer to an experience ranging over some thousands of cases during the past three years, and to affirm the existence of abnormal muscular spasm in acute cases and of degeneration, as shown by a wasted or flabby state of the muscles in chronic disease, and even of the coexistence of these conditions where one apex is acutely affected and the other showing signs of advanced tuberculosis. Although enthusiastic as to the practical value of his observations, Dr. Pottenger fully recognizes that they are open to other interpretations, and he discusses many of these very fully. He explains by means of diagrams and anatomical drawings the various actions of the neck muscles and the results that have been from time to time described as due to their over-action upon the upper ribs when fixed by ankylosis of their joints, but the arguments are ultimately summarized in favour of the explanation which he has undertaken to prove. The whole monograph is interesting both from the scientific and the purely clinical points of view, but it has yet to be ascertained whether the early changes which are described can be detected by the palpatory powers allotted to the average observer, or whether a special sense is needed which can, or cannot, be acquired.

OPOTHERAPY.

DR. NAAMÉ'S studies in endocrinology,[6] despite their slender bulk, contain a number of interesting and suggestive observations, more, indeed, than may sometimes be found in volumes of quite portly dimensions. Like most of us, the author is deeply impressed by the significance of recent discoveries with regard to the action of the various internal secretions; but, not content with a mere academic interest, he has thought out many of the problems arising out of these discoveries, and put his provisional solutions to the test of therapeutic experiment, with gratifyingly successful results. He is a strong believer in the future of opotherapy, and he certainly advances weighty evidence in support of the faith that is in him. Among the conditions whose pathogeny and treatment are briefly but concisely discussed are cholera, seasickness, the vomiting, diarrhoea, and night-sweats of tuberculosis, hysteria, epilepsy, the vomiting and cravings of pregnancy, and neurasthenia. Dr. Naamé regards the choleraic syndrome as the manifestation of an acute failure of the suprarenal bodies, due

[4] *Pathology, General and Special.* By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H. Third edition. London: J. and A. Churchill. 1912. (Post 8vo, pp. 624; figs. 15, plates 32. 10s. 6d. net.)

[5] *Muscle Spasm and Degeneration in Intrathoracic Inflammation and Light-touch Palpation.* By Francis Marion Pottenger, A.M., M.D., LL.D., Medical Director of the Pottenger Sanatorium, Monrovia, California. London: Henry Kimpton. 1912. (Roy. 8vo, pp. 104; 16 illustrations. 9s. net.)

[6] *Etudes d'Endocrinologie.* Par Docteur Naamé. Paris: A. Maloine. 1913. (Cr. 8vo, pp. 72.)

to the action of bacillary toxins upon them; and his view is confirmed by the cures he has effected in grave cases of Asiatic cholera by the administration of adrenalin. Seasickness he attributes to a functional inhibition of the suprarenals by reflex impulses of abdominal source: this condition he also finds responsive to treatment by adrenalin. In the chapter dealing with the pathogeny and treatment of hysteria, the author suggests that cerebral stability is conditioned by the functional equilibrium of the thyroid and parathyroid glands, which he regards as antagonistic, the function of the first being trophic and excitant, that of the second antitoxic and inhibitory. On this hypothesis, the fundamental condition in hysteria is a functional insufficiency of the parathyroids, with secondary thyroid exhaustion. Dr. Naamé treats the malady with moderate doses of parathyroid, with one-tenth as much thyroid extract. He considers that the inhibition of the parathyroids is due to a reflex impulse, usually of ovarian origin. Epilepsy he regards as a somewhat similar condition—a toxaemia due to inhibition of the parathyroids, with suppression of their antitoxic function. The fact that epilepsy is particularly liable to supervene at or about puberty indicates a causal relation between the functional changes that then occur in the ovaries or testicles and the disease. The author suggests that these changes involve a severe demand upon the inhibitory function of the parathyroids, which, in epileptics, is not adequately met. The vomiting of pregnancy is attributed by Dr. Naamé to auto-intoxication consequent upon arrest of the internal secretion of the ovaries, aggravated, during those early months when the symptoms are often most acute, by thyroid insufficiency. He has obtained good results by the administration of the combined ovarian and thyroid extracts.

VESICAL CALCULUS.

IN a book of some 600 pages Professor SCHIAVONI[7] discusses with great fullness the subject of stone in the bladder. There are 134 illustrations, which really help the text and are good in themselves, a good bibliography, and a full index of proper names quoted in the book. The first six chapters deal with the physical and chemical properties of vesical calculi. Two chapters are allotted to the etiology and pathogenesis of cysto-lithiasis; symptoms, diagnosis, and prognosis each take up a chapter, then follows a historical retrospect of the various modes of treatment, a good account of the anatomy of the perineal regions, and full and detailed chapters on the various modern methods—one chapter alone is given up to a careful comparison of the relative merits of perineal and hypogastric cystotomy. The author goes rather fully into the anatomical alterations which arise in the bladder as the result of the constant irritation of a stone, and how these set up various infective processes, from a mild cystitis up to definite malignant growths. Lithotripsy and lithoplaxy are adequately described, and a comparison between these and cystotomy, with a final summing up as to the indications and contraindications for each method is given. A useful chapter at the end is devoted to certain considerations as to the general hygiene of these cases, whether operated upon or not. Looked at merely from the point of view of a compendium of recent and up-to-date knowledge about stone in the bladder, the work deserves high praise; it collects into one volume data as to analyses and syntheses which are scattered about in many different treatises, and large and wide as are the aspects of such a subject, it is hard to find a section that has escaped the notice of the author. The illustrations, which even in these days too often obscure rather than elucidate the text, are in this case conspicuously useful, relevant, and not redundant. Professor Roncali contributes a short commendatory preface.

[7] *Patologia e Terapie chirurgica dei Calcoli dell a Vesica Urinaria.* Del Professor M. Schiavoni. Turin: U. Tipografico. 1912. (Royal 8vo, pp. 615; plates 134.)

MAJOR R. J. BLACKHAM, R.A.M.C., who has been associated with Colonel Roberts, I.M.S., in the treatment of His Excellency the Viceroy of India since the outrage at Delhi on December 23rd, has been appointed Honorary Surgeon on His Excellency's personal staff.

NOTES ON BOOKS.

THE "*Wellcome*" *Photographic Exposure Record and Diary*[1] is correctly described by its publishers as a photographic encyclopaedia in brief. It combines a reliable treatise on the modern methods of photography, with ample space for a complete record of exposures under varying conditions, and a diary sufficient to chronicle the work of each day in the year. The book is in the form of a pocket-book with wallet and pencil, and provides directions very useful to the tourist both at home and abroad. The directions and formulae given refer exclusively to Messrs. Burroughs, Wellcome, and Co.'s tabloid products, but it is sufficient to say that they are of high excellence. Those who use them will avoid the painful experience of seeing their negatives hopelessly stained and spoilt by employing impure and stale solutions. Negatives so stained—always, alas! the best—are periodically brought forth to be "doctored" by the latest process, only to be sadly returned to the cabinet as "incurables." The useful table of weights and measures contains only one mistake—the equivalent in grains of the decigram. The various methods of development, useful to the inexperienced, are fully described. The expert will probably still continue to watch and control the development of his plate as heretofore. The methods of control during development do not seem to have received the careful description that they deserve. The treatment of over-exposure recommended—namely, by development for strong contrast and subsequent reduction—will be rejected by most workers in favour of early fixation followed by intensification. With reference to the "exposure calculator" which is included in this handy little pocket-book, it may be pointed out that the whole secret of successful photography lies in accurate exposure, and no "calculator" which does not register the actually existing conditions of light can be satisfactory. It seems probable that an exposure meter, on the lines of the "chronoscope" recently introduced by Messrs. Lumière, will shortly be invented, applicable to colour photography also, both for out-of-door and interior work, and to that most difficult branch of the art, colour photomicrography. Directions are given for the treatment of autochrome plates by rytol. Of this we have no experience, but would prefer to use the developer and method recommended by the maker of the plate in an operation of such difficulty and delicacy. All the other departments of photographic work receive adequate attention in this excellent little treatise.

The Paris journal, *La Presse Médicale*, has published a handbook[2] to medical institutions in Paris and the facilities afforded for medical education. The greater part of the volume is concerned with the various classes and clinics, but the particulars given with regard to some of the hospitals will be of value to visitors, who will, however, probably turn first to the introduction, which deals more generally with the subject, and contains a paragraph on the Continental Anglo-American Medical Society.

In these days of civilian ambulance corps, rescue brigades, and voluntary aid detachments, books dealing with first aid and emergency treatment seem to be in demand. The essentials for such a book are that (1) it should explain this emergency treatment in simple, and as far as possible non-technical language; (2) it should not go beyond the legitimate sphere of first aid or emergency treatment; and (3) it should be issued at a price within the reach of all. The National Health Society, in their *Aid to the Injured and Sick*,[3] seem to have met these essentials, and the issue of the thirty-seventh edition since its first publication twenty-five years ago is ample proof of this. The new edition has been brought up to date, and a special chapter has been added on the methods of carrying injured persons. Schäfer's artificial respiration has also been substituted for Sylvester's.

In quite a different category from the foregoing must be placed *Prompt Aid to the Injured*,[4] now in its fifth edition. Although designed to be of practical value for home use

[1] *The "Wellcome" Photographic Exposure Record and Diary, 1913.* London: Burroughs, Wellcome, and Co. (1s.)

[2] *L'Enseignement Médical a Paris en 1912-1913.* Paris: Masson et Cie. 1913. (Demy 8vo, pp. 128. Fr. 0.50.)

[3] *Aid to the Injured and Sick.* By Henry W. Gell, M.A., M.B.Oxon., M.R C.S. Thirty-seventh edition. London: The National Health Society. 1912. (Fcap. 8vo, pp. 40. Price 2d.)

[4] *Prompt Aid to the Injured.* By Alvah H. Doty, M.D. Fifth edition. New York: D. Appleton and Co. 1912. (Cr. 8vo, pp. 245; figs. 85. 6s. net.)

and among workmen, we find much of its information wholly outside the domain of legitimate first aid. We are told, for example, that normal bone struck with a probe gives a dull sound, but when the periosteum is removed it feels hard and rough, and gives a metallic sound; that a tampon should not be left in a wound longer than twelve hours; that poultices are employed to hasten the removal of a slough; that the alkaloid of a drug should be selected for hypodermic medication; and that the stomach may be emptied by siphonage, which is described. This information, as also the description of the spleen, the ligamenta subflava, the varieties of ligament, and granulation tissue, are all beyond that prompt aid in emergency by unskilled people which alone should be taught. We do not think any good purpose can be served by giving such anatomical, medical, and surgical details to miners and factory hands, the class for whom, according to the preface, this book is specially meant.

Nova et Vetera.

PROVERBIAL MEDICINE.

PROVERBS REGARDING ALCOHOL.

IN a previous article (p. 291) proverbs relating to diet in general were dealt with; now, some consideration must be given to those which are attached to special kinds of food. Indeed, some of the most interesting of medical or health maxims are connected with the meat and drink which satisfy or stimulate our appetite and nourish our frames.

First, some space may be given to the proverbs for and against alcohol. "And it came to pass . . . that they cried out and said O man of God, there is death in the pot";[1] and *mors in olla*[2] (death in the pot) has become a proverb. Now, notwithstanding the fact that the context of this passage makes it plain that gourds from a wild vine had been put in the pot, it has not been customary to think of this proverb as one that might be urged in support of total abstinence. Lean, however, in his *Collectanea*,[3] has this interesting note: "This, I take it, does not mean the stewpot, but the drinking vessel. . . . If so, it is the earliest authority for total abstainers." It is, of course, quite certain that "in his pots" used to mean in a state of intoxication, just as "in his cups" means so still.

Though we can perhaps hardly find in Lean's argument sufficient proof to warrant the placing of *mors in olla* among the teetotal maxims, there are some sayings which may be legitimately used to strengthen the cause of temperance, and they deserve passing notice. "He that can master his thirst is master of his health" is one proverb, and it has a French equivalent—*Qui est maître de sa soif est maître de sa santé*. The Scottish poet, Henryson[4] writing in the second half of the fifteenth century, gave the oft-quoted lines, "They drank the water clear, Instead of wine, but yet they made good cheer," expressing a sentiment encouraging to the temperance orator loath to admit that the cup cheers as well as inebriates. A series of sayings affirm that the mental output associated with alcohol is of poor quality. Longfellow, in his prose work *Hyperion* (Bk. IV, c. iii), wrote, "He who drinks beer thinks beer, and he who drinks wine thinks wine." Washington Irving, in that delightful part of *The Sketch Book* which is entitled "Stratford-on-Avon," tells the story of the drinking match at Bedford where Shakespeare, in spite of the proverb that "they who drink beer will think beer," was as true to his ale as Falstaff to his sack. Swift,[5] in one of his letters to Mrs. Johnson (Stella), was evidently referring to the same maxim when he wrote, "We were to do more business after dinner, but after dinner is after dinner—an old saying and a true, much drinking, little thinking"; but the authorship of the saying is uncertain, for, although it has been attributed to Warburton,[6] it is probably of earlier origin.

The teetotaler is not left wholly in triumph, for there is an antagonist's touch in the phrase, "They who drink water will think water." "Deep drinkers have ever shallow memories" expresses a result of alcoholism in an easily remembered form; and in almost every language there is a proverb for the idea that "where the wine goes in there the wit goes out." Thus we have Pliny's statement:[7] *In proverbiam cessit, sapientiam vino obumbrari* (It has become a proverb that wisdom is clouded by wine); there is the short and expressive German *voll, toll* (full, mad); there are two sayings in Italian containing the same notion, namely, *Vino dentro, senno fuora* and *Dove entra il bere, se n' esce il sapere*; and there is the Dutch *Als de wijn ingaat, gaat de wijsheid uit*. Another result of alcoholic excess is hinted at in the Italian proverb, *Dove entra il vino, esce la vergogna* (Where wine enters, shame departs); and in Terence's play[8] of *The Eunuch*, Chremes admits that the wine he has drunk has got the upper hand, finds that his female companion has become much more charming, and announces that it is a true saying that "Venus grows cold without Ceres and Bacchus" (*Sine Cerere et Libero friget Venus*).

The loss, under the influence of wine, of the intellectual powers and the domination of the mind by the lower desires are referred to in strong terms by the Pardoner in Chaucer's *Canterbury Tales*[9]; he is there made to say:

> For dronkenesse is verray sepulture
> Of mannes wit and his discrecioun,
> In whom that drynke hath dominacioun,
> He kan no conseil kepe, it is no drede;

and again, "A lecherous thyng is wyn." The loquacity born of alcohol is put in proverbial form in the Latin saying,[10] *Quod in corde sobrii, id in lingua ebrii* (What is kept in the heart of a man sober is found in the tongue of a man drunk); and Horace[11] asks *Quid non ebrietas designat?* (What strange thing does not drink effect?) and answers, *Operta recludit* (It discloses secrets). Yet another maxim is "Wine neither keeps secrets nor fulfils promises."

A few proverbs are yet more condemnatory of the taking of alcohol. *Plures crapula quam gladius* (Drunkenness kills more than the sword) is a Latin saying, and "More men die of drink than of thirst" is an English equivalent; there are also two German ones, *Es trinken tausend sich den Tod, ehe einer stirbt vor Durstes Noth* (A thousand will drink themselves to death before one dies of thirst), and *Im Becher ersaufen mehr als im Meer* (More are drowned in the goblet than in the sea). The play upon words in the saying[12] "Beer fills many a bottle and bottle fills many a bier" has a smack of modernity about it.

Then there are the sayings which compare inebriety to insanity. There is, for instance, Sir Edward Coke's dictum,[13] "As for a drunkard, who is *voluntarius daemon*, he hath no privilege thereby, but what hurt or ill so ever he doeth, his drunkenness doth aggravate it"; and Coke's *voluntarius daemon* is foreshadowed in the Latin proverb, *Nil similius insano quam ebrius* (Nothing is more like a madman than a drunk person). Cassio[14] bitterly calls out, "O God, that men should put an enemy in their mouths to steal away their brains"; but Iago answers, "Come, come, good wine is a good familiar creature if it be well used; exclaim no more against it"; but Carlyle[15] is with Cassio, for he blazes forth in his denunciation of gin, "liquid madness sold at tenpence the quartern!"

The well-known effect of alcohol upon the continuous smoothness and regularity of locomotion is found expressed in the Latin quotation from Plautus,[16] who makes Pseudolus say, "*Magnum hoc vitium vino est, pedes captat primum, luctator dolosus est*," which may be rendered that "The great fault in wine is that it first trips up your feet; it is a cunning wrestler." Our own George Herbert,[17] too, has the same idea in his lines:

> . . . . Poure the shame
> Which it would poure on thee, upon the floore.
> It is most just to throw that on the ground
> Which would throw me there if I keep the round.

[1] *Bible*, II Kings, iv, 40.
[2] *Vulgate Version of Bible*, ibid.
[3] *Collectanea*, I, p. 509.
[4] Henryson, Robert, *Uponlandis Mous and the Burges Mous* (1430-1506).
[5] Swift, Jonathan, *Journal to Stella*, Letter XLII.
[6] Benham, *Book of Quotations*, p. 446.
[7] Pliny, *Natural History*, Bk. XXIII, c. 23; Bostock and Riley's *Translation*, vol, iv, p. 473.
[8] Terence, *Eunuch*, Act iv, sc, vi.
[9] Chaucer, *Canterbury Tales*, Pardoner's Tale, ll. 558-561.
[10] Benham, *Book of Quotations*, p. 659.
[11] Horace, *Epistles*, Bk. I, Ep. 5.
[12] Kaye, J. R., *Public Health*, xviii, p. 562, 1905-6.
[13] Coke, *Institutes*, a commentary upon Littleton, iii.
[14] Shakespeare, *Othello*, II, ii, line 290.
[15] Carlyle, *Miscellanies*, Chartism, c. IV.
[16] Plautus, *Pseudolus*, Act V sc. i.
[17] Herbert, G., *The Temple*, The Church Porch stanzas.

Herbert also refers to the disfigurement caused by alcoholic indulgence in the words:

> Stay at the third cup or forego the place,
> Wine above all things does God's stamp deface.

As one may quote, "The nose that is red cannot be hid."

"A morning sun, and a wine-bred child, and a Latin-bred woman seldom end well" comes from George Herbert's *Outlandish Proverbs;* and several sayings contain the idea that the child who is conceived in drunkenness seldom begins well. The ancient writers saw in Vulcan's deformity the result of Jupiter's inebriety. Burton,[18] in his famous work, quoting from Plutarch,[19] wrote, "*Ebrii gignunt ebrios*" (One drunkard begets another), and cited Lemnius, Alsarius Crutius, Macrobius, Avicenna, and Aristotle himself as of the same opinion. Plutarch[19] reported of Diogenes that one day seeing a youth out of his mind and crazy, he said, "Young man, your father was drunk when he begot you" (*Adolescens, pater te ebrius genuit*). Other sayings refer to the lesser penalty of a conception under alcohol—the birth of a female infant. Lean, in his *Collectanea*,[20] has gathered from the old dramatists a number of quotations illustrating this belief—for example, "I lay my life 'twill prove a girl, because 'twas got in drink"; and "Till drunk he went to bed, and in that fit He got the second birth, a female chit."

Other proverbs, without actually condemning alcohol, do so by imputation by reason of their strongly expressed approbation of temperance. There is, for instance, the saying, "Temperance is a bridle of gold," which is found in Burton's *Anatomy of Melancholy;* there is also, "Temperance is the nurse of chastity,"[21] and Pope's saying,[22] "Health consists with temperance alone." Cicero wrote long ago, *Potest exercitatio et temperantia etiam in senectute conservare aliquid pristini roboris* (Exercise and temperance can preserve something of our early strength even in old age); and Rousseau, in more recent times, added his testimony—*La tempérance et le travail sont les deux vrais médecins de l'homme.* "Drinking water neither makes a man ill nor his wife a widow" is one of Kaye's proverbs,[23] and one quoted by Lean[24] is "If you'd be healthy, happy, and stout, use nothing but water within and without."

The proverbs, maxims, and common sayings which have been taken notice of above may all be described as taking their stand on the temperance platform; but it can by no means be claimed that they are more numerous or more influential than those which gather themselves together on behalf of alcohol as a prime cause of well-being and conviviality. Indeed, proverbiology must be regarded as a dangerous two-edged weapon in the hand of an ardent temperance reformer; he cannot safely trust to it in his contest with the evils of alcoholism.

Some proverbs recognize the dangers of wine, but hint that the same risks exist apart altogether from its use. There is, for instance, the proverb in Ray's collection that reads, "Drink wine and have the gout, drink no wine and have it too," a saying which is wittily transformed by Sydenham into, "If you drink wine you will have the gout, and if you do not drink wine the gout will have you." Others admit the risks of imbibing, but regard them as inconsiderable if the practice be restricted to certain occasions. Ovid,[25] for instance, maintained that given at the proper time wine is good, but given at an unfitting time it is injurious (*Data tempore prosunt et data non apto tempore vina nocent*)[26]; and Porter, in his *Two Angry Women of Abingdon* (1599), affirmed that "he is a fool will take more than will do him good."

In addition to these sayings in favour of moderate or of well-timed recourse to the flowing bowl, there are the proverbs which boldly and firmly take their stand on the side of the drinker. Lean[27] has gathered together a number of these sayings, so convenient to repeat when the bottle is travelling round the table. Here are some: "Drink is the best physic"; "It is a good wind that blows a man to the wine"; "Wine makes good blood"; "Good wine makes good blood"; "Of all the meat in the world, drink goes the best down"; and "Good drinkers think none ill." Some of these are to be found in other languages: thus, in Spanish we find *El buen vino cua buena sangre*,[28] and in Italian, *Chi beve vino beve sangue e chi acqua cotta flemma* (Who drinks wine drinks blood, and who drinks water drinks phlegm); and in Latin there are *Nunc vino pellite curas*[29] (Dispel now your cares with wine), and *Vina parant animos, faciuntque coloribus aptos, cura fugit multo diluiturque mero*[30] (Wine stimulates the mind and makes it quick with heat, care flees and is dissolved in much drink). One of Allan Ramsay's paradoxical and humorous sayings is, "They that drink langest live langest," and in a certain sense this is unanswerable; another proverb[31] from the north of the Tweed is "A dreigh (long) drink is better than a dry sermon." The wine-lover carries the war into the teetotal physician's territory in the proverb,[32] *Es giebt mehr alte Weintrinker als alte Aerzte* (There are more old wine-bibbers than old doctors); and the same idea is found in the French of Rabelais,[33] *Il y a plus de vieulx ivrognes qu'il y a de vieulx médecins;* but George Herbert, in his *Outlandish Proverbs*, turns this statement round into "There are more physicians in health than drunkards." There are, of course fallacies in any such statement; for one thing, those who drink alcohol are more numerous as a class than are medical men; there are doctors who drink as well as doctors who abstain, and so on. Proverb or no proverb, the insurance companies look with mistrust upon the drinker and more especially upon the "soaker." "Often drunk and seldom sober falls like the leaves in October."

"The drunkard's argument," as it has been called, is set forth by T. Adams:[34] "He that drinks well sleeps well; he that sleeps well thinks no harm; he that thinks no harm is a good man; therefore he that drinks much is a good man." Lord John Russell brought home with him from Spain a version of this proverb which he had got from a priest there. It ran thus:

> Qui bene bibit, bene dormit;
> Qui dormit non peccat;
> Qui non peccat salvatus erit.

Another specious statement is, "That which doth an old man good can do a young man no harm," founded, we suppose, upon the aphorism that "Wine is old men's milk,"[35] which appears in Italian as *Il vino è la tetta di vecchi*, and in French, *Ainsi peut il estre des enfans qu'on a laict, le vin desquels est le laict, comme, au contraire, nous disons que le laict des vieux c'est le vin.* The Bible itself has been invoked on behalf of wine-drinking: "Wine that maketh glad the heart of man" (Psa. civ, 15; *Vinum bonum laetificet cor hominis* in the Vulgate), and "Be no longer a drinker of water, but use a little wine for thy stomach's sake and thine often infirmities" (1 Tim. v, 23, R.V.), have been many a time dragged into the argument, to be met, of course, by the countervailing texts: "Wine is a mocker, strong drink is raging" (Prov. xx, 1); "Who hath woe? . . . they that tarry long at the wine . . . Look not thou upon the wine when it is red . . . at the last it biteth like a serpent" (Prov. xxiii, 29–32); and "Woe unto them that are mighty to drink wine, and men of strength to mingle strong drink" (Isaiah v, 22).

Some proverbs give special approbation to ale: "Good ale is meat, drink, and cloth" is from Ray's *Compleat Collection*, whence also come the following lines:

> He that buys land buys many stones;
> He that buys flesh buys many bones;
> He that buys eggs buys many shells;
> But he that buys good ale buys nothing else.

It would seem that in the opinion of the proverbiologist ale, good ale at least, gives man what he needs without injurious or unnecessary ingredients or accompaniments;

[18] Burton, R., *Anatomy of Melancholy*, Pt. I, Sect. ii, mem. i, Subsect. vi.
[19] Plutarch, *On Education*, 33.
[20] Lean, *Collectanea*, ii, pp. 355, 356.
[21] Wycherley, *Love in a Wood*, Act III, sc. iii.
[22] Pope, *Essay on Man*, Ess. 4, line 79.
[23] Kaye, *Public Health*, loc. cit.
[24] Lean, *Collectanea*, i, p. 485.
[25] Ovid, *Remedia Amoris*, 132.
[26] King (*Classical Quotations*, p. 546) translates this, "A glass of port does good at proper times, but else does hurt."
[27] Lean, *Collectanea*, I, p. 482.
[28] Lean, *Collectanea*, I, p. 483.
[29] Horace, *Odes*, Bk. I, Ode vii, 31.
[30] Ovid, *Ars Amatoria*, Bk. I, line 237.
[31] A. Cunninghame, *Glossary to Burns*.
[32] Benham, *Book of Quotations*, p. 866.
[33] *Gargantua*, Bk. I, ch. 42.
[34] Adams, T., *Works*, 1629.
[35] Lean's *Collectanea*, iv, 197.

but Fergusson, in his *Scottish Proverbs*,[36] has a saying which gives a modified appreciation—namely, "Better good sale (health) nor (than) good ale."

One proverb is bold enough to recommend a drinking bout once a month, on the pretext, we may suppose, that there will be then an accumulation of evil humours which call for correction or expulsion; for a similar purpose periodical bleeding was once practised. The proverb[37] is: *Qu'il faut à chaque mois, Du moins s'enivrer une fois* (Every month one ought to get drunk at least once). Surely the boldest saying, however, is the Scottish one:[38] "God is kind to fou (drunken) folk and bairns"; or, as it is in French: *Dieu aide à trois sortes de personnes—aux fous, aux enfants, et aux ivrognes.* It is true that children and drunken men often fall without seriously injuring themselves, but it is hardly necessary to invoke a special providence for them, the more probable explanation being the fact that they fall without making violent efforts to save themselves. At any rate, "'Who can help sickness?' quo' the drunken wife when she fell into the gutter," as Thomas Fuller's proverbial witticism puts it (*Gnomologia*). Arguments in favour of the bottle, whether expressed in proverb form or not, are often ingenious, sometimes persuasive, but generally evasive. It is easy to find reasons for doing what one wishes to do; a sarcastic proverb says: "A bad excuse is better than none," and many things "prove an excuse for the glass."

So far as proverbs go, the battle over alcohol must be regarded as a drawn one; if there is any advantage at all, it is to be found on the side of the drinker rather than on that of the abstainer. But, if we look more particularly at the medical proverbs, it will be discovered that they give a stronger support to the latter; whilst the sayings which refer to conviviality and sprightliness and to a certain unbending of manners and flow of conversation go over in a body to the former. In this matter actuarial facts deserve more respect than proverbial wisdom. Indeed, many of the proverbs obviously are special pleaders, and some are brazen-facedly prejudiced. *In vino veritas* (*ἐν οἴνῳ ἀλήθεια*) may contain a truth, albeit an unwilling or involuntary one; but who shall say that *pro vino* arguments are unbiassed? By the way, and before we pass from this subject, it will be news to some that the maxim "You can't make people sober by Act of Parliament" did not, as at first employed, refer to non-indulgence in alcohol at all; the word *sober* in it had the significance of moral or virtuous. Of recent years it has not uncommonly been used by those who are opposed to temperance legislation. The opinion it expresses may turn out to be true, but the proverb in its inception did not contain the thought which had been put into it.

NEMATODES IN THE PRODUCTION OF CANCER.

In cancerous and other tumour formations there may sometimes be observed either in the growth itself or in its surroundings certain animal parasites, especially helminthes, and it may be assumed that these parasites stand in a causal relationship to the neoplasm, just as chronic irritants of other kinds. In bilharziosis there occur tumours which are not only identical with carcinoma and sarcoma histologically, but which have been shown to produce metastatic growths when the primary lesion is in the bladder. Scattered throughout the literature of cancer are various observations on the presence of nematodes in human cancers, but it has not been justifiable to conclude that the concurrence of tumours and parasites is more than accidental. Borrel has laid great stress on the occurrence of endemic cancer of mice, holding that certain parasites—Demodex, Nematodes, Cysticercus, and others—may carry an unknown virus capable of producing tumour formation, and he has not only demonstrated such parasites in the tumours of mice, but he has found the demodex in human cancers, in early epithelioma of the face and in carcinoma of the breast. As far as his published papers go, it cannot be said that he has established his hypothesis because he had no controls wherewith to judge the frequency with which these parasites existed in non-tumour conditions, and, as a matter of fact, Orth and Tsunoda proved the presence of the demodex in the nipples of women without cancer of the breast as well as with it. Haaland, when working in the laboratories of the Imperial Cancer Research Fund, found nematodes in the mammary glands of a large number of old mice, and there was undoubted evidence that they produced pathological changes, intense inflammation, and sclerosis of the connective tissue, often accompanied by hypertrophy of the mammary epithelium. He considered that these interstitial changes might be the eliciting stimulus of malignant epithelial growth in view of the great frequency of carcinoma in the mammary glands of mice. Whatever view be taken regarding the relationship of such parasites to new growth, causal or casual, the use of such ideas as a working hypothesis needs no justification.

[36] Fergusson, David, *Scottish Proverbs*, 1641.
[37] Benham, *Book of Quotations*, p. 728.
[38] Ibid., p. 784.

Gastric Tumours in the Rat.

In a communication appearing in the *Berliner klinische Wochenschrift* of February 17th, Professor Fibiger, of Copenhagen, has brought forward a very convincing proof that nematodes really have a pathogenetic significance. In 1907 he noticed, in performing autopsies on three rats which had been injected with tubercle bacilli and which had been kept in the same cage, that the stomachs were the seat of large papillomatous growths, the walls were much thickened, and the cavity of the stomach was almost obliterated. The growth was the same in all and was probably malignant in nature. The rest of the alimentary tract was normal; no other pathological changes except pneumonic patches in the lungs could be found; and there were no metastases in other organs. The tumour material was injected into a number of normal rats, subcutaneously or intraperitoneally, and four rats also were fed on tumour tissue, but in no case did a positive result follow. Microscopic examination of the tumours showed marked thickening of the stomach wall due to epithelial hyperplasia and papillomatous formation in the mucous membrane with a breaking through of the muscularis mucosa by the proliferating epithelium, and the formation of isolated cell-nests and islets of squamous epithelium in the submucosa. Here and there, extending through the muscular coat on to the serous covering, were cysts filled with cornified epithelium. There was considerable round-cell infiltration and irregular proliferation of the connective tissue. The pylorus in all cases was normal. It has to be borne in mind that the rat's stomach is separable into two parts—the fundus lined by squamous epithelium, and the pyloric part lined by cubical and columnar cells, and all these growths were of the nature of squamous epithelioma.

Nematode Eggs and Embryos in the Tumours.

On further investigation of the histological preparations Professor Fibiger found oval holes in the epithelium under the stratum corneum, while other similar spaces contained complex bodies suggestive of a parasite containing eggs. By serial sections he was able to reconstruct this parasite, apparently a nematode, measuring 1.6 cm. in length by 0.25 mm. in diameter. The eggs had a double contour, and contained coiled-up embryos. Such eggs were also found lying free between the upper layers of the epithelium. In later researches he succeeded in teasing out three complete nematodes from fixed tumour material. The nematode is of a hitherto undescribed species.

The Cockroach the Intermediate Host.

The interest of the investigation starts from this observation, and one cannot but admire the determined way in which Professor Fibiger set himself to discover whether the association of the parasites with the tumour formations was more than accidental. In order to obtain an idea of the frequency of cancer of the stomach of the rat and also of nematodes in the stomach of that animal—a very essential preliminary—he performed autopsies on 1,144 rats, and minutely examined the stomachs, with the result that he was able to pick out only 11 cases which showed, at most, very small ulcers or epithelial hyperplasias; nothing remotely resembling the condition of the cases above described could be found. In 12 of these rats the mucous membrane contained a nematode, and in 10 more another kind of nematode was found free in the cavity; in the former case the parasite belonged

to the trichosomes and in the latter to the ascarids, but in neither case did it resemble the parasites originally found in the three tumour rats. The series was therefore sterile as far as the tumours and parasites sought for. After much inquiry Fibiger managed to trace the three rats to Dorpat, in Russia. Presumably Danish mice were not affected with the disease. The problem was now to discover the life-cycle and habitats of the peculiar nematode, for it was possible that some intermediate host played a part in its development. In consequence of a communication by Galeb showing that the cockroach, *Periplaneta orientalis*, was the intermediate host of a filaria which in other stages was found in the stomachs of rats, attention was directed to this possibility, and a number of wild rats (*Mus decumanus*), in the stomachs of which could be found the *Periplaneta orientalis*, were obtained; but in none were nematodes or new growths discovered, and feeding experiments with these cockroaches were quite negative. Entirely different results accrued from the examination of a number of rats from a large sugar refinery, where the cockroaches belonged to the species *Periplaneta americana*. From the beginning of March till the end of December, 1911, 61 rats were caught in this locality; 25 of these were killed immediately and the rest were isolated in the laboratory and examined when they died spontaneously. In 21 of the whole number the fundus was normal and no parasites were found, but in the remaining 40 that part of the stomach showed nematodes, which in size, form, and the appearance of the eggs were identical with the long-sought-for nematodes. In 18 of the 40 rats the stomach showed striking pathological changes that might be considered as stages of definite tumour formation, and of these no less than 9 showed very advanced tumours of the same type as those originally found. The result, therefore, seemed to indicate that it was no accidental association, and that *Periplaneta americana* was the intermediate host of the parasite.

In order to establish more firmly this fact, 57 rats, bred and reared in the laboratory, were fed with *P. americana* from the sugar refinery. The feeding experiments lasted for five to twenty days, and the largest number of cockroaches given to any one animal was 94. These rats were isolated and examined only when they died. The result was that in 3 neither nematodes nor tumours were found; in 54 nematodes were discovered in the stomach; in 18 of these the fundus was normal, but in 36 the pathological changes of growth formation were obtained, being very marked in 7 and identical with the original type discovered. The nematodes also were identical in size, shape, and as regards the eggs. There was thus no doubt that the tumour formations were dependent on a particular nematode carried by *Periplaneta americana*. Free eggs were found in the excreta of animals infected with nematodes, but no embryos, nor did embryos develop from the eggs, even when the excreta were kept for six months. Further, it was impossible to infect rats with these eggs; the cockroach was necessary for the development of the embryo. Microscopic examination of *Periplaneta americana* did not reveal any parasite in the alimentary canal, but in the striated muscles of the extremities and in the prothorax, spiral, trichina-like bodies often surrounded by a fine capsule of connective tissue were easily discovered, and were unmistakably further stages of the eggs. In order to be quite certain that no other parasite existed, an endeavour was made to transfer the nematode to those cockroaches which already had been found not to harbour it naturally, namely, the *Periplaneta orientalis*, and it was easily accomplished in every case by allowing these latter cockroaches to feed on the eggs of the nematodes or on the excreta of the infected rats. When they were investigated forty-two to sixty days afterwards the same curled-up embryos were found in their muscles as were seen in *P. americana*. A new series of laboratory rats were now fed with the artificially infected *P. orientalis*. Out of 11 rats fed on cockroaches which had been infected from infected rat excreta, 7 showed nematodes in the stomach, and in 3 of these cases there was the marked hyperplasia of the mucous membrane as originally described; and in 12 more rats fed with cockroaches infected by the eggs parasites were found in 3 cases, in 1 of which marked tumour formation was evident. As control experiments 43 fresh laboratory rats were fed on non-infected cockroaches, each getting 11 to 50 (as compared with half of the prothorax of a single cockroach in the infected experiments), and in no case did pathological changes in the stomach ensue. It could always be told in from six to eight weeks by an examination of the excreta, after administration of infected cockroaches, whether the rats developed nematodes or not, for the eggs are easily distinguished.

The Life-History of the Nematode.

The life-history of the nematode is as follows. It lives in the squamous epithelium of the rat's stomach, occasionally also in the gullet, and sometimes in the tongue; in these situations it matures, and gives off eggs, which are thrown off with the epithelium and excreted with the faeces. The cockroach eats this, and the eggs develop into free embryos in the muscles of the extremities and prothorax, where they can be detected as trichina-like bodies in six to eight weeks after ingestion; if such cockroaches be now eaten by the rat, the embryos escape from their capsule, and migrate to the fundus of the stomach where the female after two months commences to deposit eggs. The size of the male nematode is ½ cm. to 1 cm. long by 0.1 mm. to 0.16 mm. in diameter, and of the female 4 cm. to 5 cm. long, by 0.2 mm. to 0.25 mm. in diameter. The eggs are oval and clear, and are surrounded by a double contoured membrane, which is thicker at the poles. They measure 0.06 mm. by 0.04 mm., and contain curled-up embryos with ringed cuticle. The nematode is of a kind not hitherto described, but it can be assigned to the genus spiroptera.

The Pathological Changes Produced by Nematodes.

Of the 118 rats investigated, 61 from the sugar refinery and 57 experimentally infected in the laboratory, 94 contained spiroptera in the fundus of the stomach; in 40 the presence of the parasite was the only abnormality, whilst in 54 there were distinct anatomical changes. The parasite was only found in that part of the stomach lined by squamous epithelium. It lay between the stratum corneum and the stratum granulosum, though in a few cases it was found deeper in the epithelium. The pathological changes found were divisible into three stages shading into one another. In the case of 15 rats the changes were slight, the mucous membrane being thickened locally or diffusely, and appearing less opaque than normally; in 23 cases the change was marked, the mucous membrane was much thicker and the thickening was more diffuse, the surface was uneven and raised in papillomatous folds; in 16 rats the condition was advanced, the mucous membrane being covered with small and large papillomatous growths occluding the lumen, whilst the wall of the stomach was often over a centimetre in thickness. In 4 cases the cavity was obliterated by papillomatous excrescences which closed up the opening of the oesophagus and extended to the pylorus. The external surface was corrugated with dense solid projections or with polypoid nodules. In 3 cases instead of this multiple papillomatous condition the growth took the form of a single hard mass, of the size of a walnut, reaching from the fundus to the pylorus. In only one case were the changes in the gullet markedly papillomatous. These growths caused marked destruction of the stomach wall, and there could be no doubt about their infiltrative nature, and in at least four of the series it was very extensive. Certainly in 2 cases, and probably in 3, metastases were found in the lungs and retroperitoneal lymph glands, but no parasites were discovered in these secondary growths. Professor Fibiger gives a detailed account of the histological characters of the growths, and it is beyond doubt that in the advanced cases at least he had to deal with true malignant tumours a condition to which the other formations might quite well have attained if the animals had not succumbed to intercurrent maladies.

Conclusion.

The association of a definite parasite with a definite tumour of a certain locality is not the most striking feature of these carefully planned investigations and successfully accomplished results, for the association of *Bilharzia haematobia* with vesical carcinomata, pointed

out by Professor Ferguson of Cairo, is perhaps as noteworthy, but one must accord to Fibiger the honour which is his due, as being the first definitely to produce experimentally new growths.

LITERARY NOTES.

IN the interesting Life of Tolstoi written by his friend and admirer Mr. Aylmer Maude, there is an amusing account of a scene at which the author was present. The great moralist bitterly upbraided some philanthropic lady for her work amongst slum children, and declared that such establishments as crèches or day nurseries were both unnatural and unnecessary in a civilized country. This opinion is strongly characteristic of the sage, who, in matters of everyday life, was one of the least practical of men. Despite his objections, however, to the crèche as a substitute for the mother, these establishments still continue to increase and multiply; and many hundreds of working women at the present day have reason to bless an institution which enables them to earn bread for their families without being haunted by the fear that the children will come to harm in their absence. The February number of *The Child* contains an article by Dr. Bernard Myers, in which the important part which may be played by a well-managed day nursery in the slums of a great city is very clearly shown. It is not merely the child's bodily welfare that profits by his daily sojourn in the crèche. Besides being properly fed and cared for, he is preserved, during the daytime at least, from possible danger in his own home and from the certain contamination of the streets; and the hours spent in pure and wholesome surroundings can hardly fail to have as beneficial effect upon his moral as upon his physical growth. Moreover, many crèches include a school for mothers, where they may learn the "mother-craft" in which so many women of the working classes are lamentably deficient. Mother-craft is more or less a lost art with a large proportion of the present generation of women; and it is to remedy this defect in modern education that Dr. G. Finch (whose article on the feeding of infants appears in the February number of *The Child*) suggests that the training of every schoolgirl should include a certain amount of instruction in the care of young children. The same number also contains an interesting account by Dr. David J. Williamson, of the Kensal House open-air school for tuberculous children.

It is seldom indeed that a prophet receives from his own countrymen the honour which is his just due. The consumption of frozen meat, for instance, is far greater in England than in France; and yet it is to a Frenchman that we owe the foundation of the refrigerating system. The January number of *L'Hygiène* contains an interesting account by M. Henri Meurisse of Charles Tellier's discovery of this method of preserving meat, which hitherto has found more favour in other countries than in his native land. M. Meurisse does not share the common prejudice against frozen food. On the contrary, when it has been properly stored, he considers it to be almost as appetizing and nutritious as when fresh, and offers it to his readers as a satisfactory substitute for the expensive article sold by the Parisian butcher, and a convenient solution of the house-keeping problems brought about by the scarcity of good meat and its prohibitive price in France at the present moment. French meat, as a rule, is less palatable than English. The same number of our excellent contemporary contains a short account by Dr. Maurice de Fleury of neurasthenia in childhood; whilst Dr. V. Ch. Lefèvre writes on the heating of private houses by electricity, and Madame Augusta Moll-Weiss contributes another of her series of articles on the hygiene of the home.

The study of place-names is one of the by-ways of history which, if followed with care and discrimination, may lead to conclusions far more wide-reaching than might at first sight be anticipated. It demands a strict application of the scientific method, and an intimate acquaintance with the district, and with the changes in its population and topography which have occurred in historic times. These qualities are shown in a paper on Scotter and Scotton contributed to the *Antiquary* at the end of last year by Dr. T. B. F. Eminson, of the former place. Both villages are in West Lindsey, a part of Lincolnshire extending from the east bank of the river Trent to the foot of the Cliff Hills. There is probably no part of northern Europe which promises better results from the study of place-names than the eastern side of England, for the inquirer may hope to throw light on the history of the successive invasions, how far they were mere raids and how far colonizations, and on the lines of traffic and the social organization of the people in the early days of our history. "Scot" occurs in a good many place-names in Lincolnshire, more, Dr. Eminson says, than in any other midland, perhaps than in any northern county. The prefix has nothing to do with the Scots or Scotland. It is really "cott" or "cote" with a contracted prefix which, he argues, signifies south. "Cott" is an Anglian word denoting a habitation, temporary or permanent, for man or animals, and survives in "dovecote." It was applied to the cotes or cotts of outlying cottars, and hamlets; it seems to have been extended to villages, but the proper term for a village was "tun," and the word is, or was until recently, applied in East Yorkshire and Lincolnshire to the smallest village. Dr. Eminson is able to show that Scott was once (*temp.* Henry VIII) Secotton, and maintains that "Se" is a contraction for "South," being led thereto, apparently, by the situation of Scotton and Scotter in relation to the river. Scotter appears in Domesday Book as Scotere, which we gather is to be dissected as S-cote-re, meaning South-cote reach (of the river); in support of this interpretation the fact that the surname Scotrick occurs in Lincolnshire is mentioned. From these beginnings Dr. Eminson launches out into an interesting discussion of the meaning of other place-names in the neighbourhood which he thinks—and he supports his opinion with many ingenious arguments—throw light on the lines of traffic in Roman and early English times. The district lay between the waterway of the Trent and the roadway of Ermin Street. The river and its tributaries, then navigable to a much greater distance from the main stream than to-day, formed the link which connected Doncaster and southern Yorkshire with Ermin Street. The traveller would take boat on the west bank of the Trent at Butterwick—in Domesday Book, Butrewic, which is to be interpreted "boat reach village"—and pass east to somewhere near the foot of the Cliff Hills along which Ermin Street ran.

Messrs. J. and A. Churchill are about to publish a book entitled *The Difficulties and Emergencies of Obstetric Practice*, by Mr. Comyns Berkeley and Mr. Victor Bonney, Obstetric and Gynaecological Surgeons to the Middlesex Hospital. The book will contain a large number of original illustrations by an artist who is himself a medical man. The same publishers have just ready the sixth edition of *A Short Practice of Midwifery*, by Dr. Jellett, Master of the Rotunda Hospital, Dublin. The new edition is to be issued with a larger page; it has been revised throughout and contains many new illustrations. The popularity of the book is evident by the fact that 20,000 copies have been printed.

THE Permanent Committee of the International Congresses of Medicine gives notice that three prizes will be awarded during the International Medical Congress in London next August. The Moscow prize of 5,000 francs, instituted in commemoration of the twelfth congress, which was held in that city, is given for the best work done in medicine or hygiene or for distinguished services in the cause of suffering humanity. The Paris prize of 4,000 francs, founded at the thirteenth congress, will be awarded to the person judged to have made within the last ten years the most important original contributions to the advancement of medicine, surgery, obstetrics, or to anatomy or biology in their applications to medical science. The Hungary prize, which was established by the sixteenth congress at Budapest in 1909, is awarded for some work in medical science which has been published in the interval between one congress and the next. This prize is of the value of 3,000 crowns. The Permanent Committee is prepared to receive suggestions to guide it in the award of these prizes. Communications, which must reach it before June 1st next, should be addressed to the committee at 10, Hugo de Grootstraat, The Hague, Holland.

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THE REFORM OF THE HOSPITAL OUT-PATIENT DEPARTMENT.

THE attention of the profession has been so entirely concentrated on the Insurance Act that other matters, even those in which in normal times it is most interested, have received scant notice. Thus it was that the Report on Hospital Out-patient Departments, issued in July last by the Committee of Enquiry appointed by King Edward's Hospital Fund, received comparatively little attention. It is, however, a most interesting and important document, especially to members of the British Medical Association, for it is a striking endorsement by the most important hospital authority in this country of the views arrived at by the Association after a good many years of patient and apparently hopeless work. We would urge those who are interested in this subject to read in the SUPPLEMENT to this issue, first the Memorandum of evidence placed by the Association before the Committee, and afterwards the Report of the Committee.

The question of hospital abuse, which has always been largely a matter of abuse of the out-patient department, has occupied the attention of several generations of medical reformers, and after the reorganization of the Association in 1903 it became one of the chief items in its programme. Gradually, year by year, from 1905 onwards, the Representative Body built up its policy, partly by discussion in the Divisions, in Committees, and in the Representative Meeting, partly by conferences between the Association and representatives of the hospitals. The aim of the Association to elevate the out-patient department from its present position as a mere casual dumping ground for all kinds of complaints, from the most trivial to the most severe, to its proper place in the organized medical service of the nation, steadily gained acceptance amongst those whose opinion was best worth having. But individual hospitals, although they might be convinced, were afraid that if they took isolated action they would suffer in the competition which is such a marked feature of the hospital world. To cut down the numbers swarming into the hospitals was to abandon the most telling appeal to the charitable but unthinking public—no case ever refused, so many thousand more patients relieved than last year. A lead was required. When in January, 1911, the governors of the King Edward's Fund appointed their Committee the Association gladly took advantage of the opportunity of placing evidence before it, for, apart from the power of the purse which the Fund exercises over so many of the London hospitals, there is no doubt that any decision taken by the Fund as to the principles of hospital management will have far-reaching influence.

The Report of the Committee is almost entirely in consonance with the principles the Association has enunciated, often, indeed, the very words of the Association are used. The Report states plainly that the out-patient department is not a fitting place for the treatment of trivial complaints, and that these should be sent away untreated except where it is deemed necessary to give first aid. It declares that the most appropriate function of the hospitals is to act as specialist and consultative agencies. It acknowledges that the out-patient departments are at present competitors with general practitioners and provident medical institutions for the attendance on persons suffering from ordinary ailments and quite able to pay small fees. It declares that the out-patient department as at present conducted hinders the establishment of provident medical services and so discourages thrift, and that the overcrowded department tends to hurried diagnosis and superficial treatment. The Committee concurs in the recommendations of the Association that the use of subscribers' letters and the system of payment by patients should both be abolished.

The Association long ago formed the opinion that the out-patient department should be a centre at which the very best medical and surgical advice should be available for those cases which could not get it elsewhere, and that this advice should be given in co-operation with the outside medical attendant of the patient, not merely in the interests of the general practitioner, but in order that the medical service of the poorer classes should be improved, and some order evolved out of what is at present chaos. Every person should have an ordinary medical attendant, either his private doctor or one attached to the provident organization of which he is a member, or, if he is too poor for this, then the parish doctor. Practitioners should be encouraged to send up their difficult or obscure cases to the hospital, secure in the certainty that the case would either be referred back to them with the opinion of the hospital expert, or, if thought advisable by the two doctors concerned, retained at the hospital for some form of treatment not available outside. The acceptance of these ideals involved, in the opinion of the Association, the acceptance of the proposition that, with the exception of emergency cases, no patients should be received at the out-patient departments except those sent there on the recommendation of an outside practitioner.

While the Committee thoroughly endorses the view that the ideal system is that outlined by the Association, it is not convinced that the selection of patients for the department can be safely left to the general practitioner alone, and, while recognizing the necessity of encouraging his co-operation to the fullest extent, is of opinion that a large development of the almoner system is essential. It will be seen that the views of the Association and the Committee are by no means incompatible. They overlap, for while the Association would rely chiefly on the co-operation of the general practitioner and would employ the almoner as an auxiliary, the Committee in its scheme puts the almoner first, giving that official various important duties, one of which is the development of the co-operation with the general practitioner. We are not convinced that the almoner system will do all that the Committee hopes from it, and we believe that the full development of the efficient out-patient department depends much more on the help of the general practitioner than the Committee yet realizes, but only experience will show the relative usefulness of the two methods. We shall not quarrel over their comparative importance, and we would welcome a thorough trial of the recommendations of the Committee just as they stand. We heartily congratulate Lord Mersey and the Bishop

of Stepney on a sound piece of work, destined, if not pigeon-holed, to be of great public usefulness.

The next step rests with the King Edward's Hospital Fund. It is believed to be watching the new hospital developments which are taking place under the stimulus of the Insurance Act before taking action, and a certain amount of delay is justifiable, for the action of St. Bartholomew's Hospital, followed as it has been by many other hospitals, is doing much to exclude unsuitable cases from the out-patient department. But this action will only exclude unsuitable cases among insured persons, who are in a minority in most out-patient departments. We trust that King Edward's Fund will not follow the example of Parliament as regards too many of the reports which are presented to it by commissions and committees, but will shortly proceed to exercise its persuasive powers with the hospitals to which it gives grants. The Fund has a great responsibility in this matter, for in the eyes of the public it stands for co-ordination and economy with efficiency. If the waste of money through the misuse of the hospitals, their overlapping and competition, could only be brought home to the public, the difficulties of raising the large annual sum necessary for the upkeep of the London hospitals, already formidable, would become unmanageable. For the Association the report of the Committee, following as it does on the emphatic endorsement of the hospital policy of the Association by the majority of the Poor Law Commission, is a most encouraging recognition of its past work and of the soundness of the principles which it has evolved and adopted.

IMMEDIATE OPERATION IN APPENDICITIS.

"Is the best result in the treatment of appendicitis to be obtained in the greatest number of cases by immediate operation or by temporizing?" This was the question put by Mr. Edmund Owen to the Medical Society of London on February 10th. His answer and the answer of all who took part in the discussion, it will have been seen from the reports published last week, is in favour of immediate operation—that is, operation as soon as the diagnosis is made, within the first twelve hours of illness if possible.

The appendix region is the seat of many surgical surprises. A case may present almost typical symptoms of inflammation of the appendix, and yet the appendix may be found to be practically normal; on the other hand, a case may present an extraordinary absence of definite symptoms, sometimes absence of symptoms altogether, and yet at operation the appendix may be found on the verge of gangrene. It is on this account that waiting for the "quiet stage" is condemned. There is, in the pathological sense, essentially no such thing as the quiet stage. Mr. Owen thinks the term unfortunate, for though there are cases in which the clinical evidences appear to subside, no one can tell with certainty what is then really going on inside the abdomen. Unless we see, we cannot know whether the inflammation has subsided, whether the appendix is "walled off," or whether the pathological process is about to hurry on to enter a worse stage. Is there, then, danger in waiting? Is it better to take a little increased risk by waiting in some few cases rather than subject many patients to unnecessary operations? To that the reply made is that the surgeon who waits cannot measure or control the risk to which he is subjecting his patient. Delay of a few hours may be, and often is, harmless, but it may prove to be fatal. There is no need to rush the patient into an operating theatre for a simple right iliac colic, but let him be seen again in a short time—that is, in a few hours, repeatedly, if need be, and the diagnosis will usually become established. But if doubt still exists, a small exploratory incision can be made with almost perfect safety, and "that small incision is part of the scheme for arriving at a sure diagnosis." Mr. Owen does not think that it is a terrible calamity that an incision should be made to explore a suspected appendix and nothing found wrong. It is far better to make that kind of mistake and make certain of the patient's safety than to wait for signs and symptoms of such definite kind that, though the diagnosis is perfectly certain, the result of the operation is not. Mr. Owen would have us "Look and see" as early as possible. It must never be forgotten that there may be comparative absence of clinical evidences in the presence of advanced and perilous disease. The pulse and temperature may be normal yet the appendix may be gangrenous or perforated; there may be no fullness, even no rigidity in the right iliac fossa, there may be very little local tenderness, the patient may be actually cheerful and inclined to chaff the doctor. It is in these "stealthy cases" that the precious hours are so often lost.

Surgery will probably never become amenable to fixed rule. But fixed rules appeal to all men: we seek guidance, we hope for relief from responsibility. Here, then, is the rule for the treatment of appendicitis which Mr. Owen and every surgeon who took part in the discussion in the Medical Society have been driven by their own experience to adopt: Have the inflamed appendix removed as soon as you know it is inflamed; if your diagnosis is uncertain, see the patient frequently till it is certain; if you are still in doubt ask a surgeon's opinion, and even then if doubt exists let an exploratory incision be made rather than wait longer.

In the animated correspondence on "Appendicitis—and Quickness," in the JOURNAL in the early part of last summer, and in the debate on appendicitis in the Surgical Section at Liverpool in July, the preponderating weight of opinion was in favour of operation as soon as the case was known to be indubitable appendicitis. So far as we remember, the only opinion in favour of temporizing was that of Sir George T. Beatson, an able and earnest controversialist. His views are crystallized in a paper in the November issue of the *Glasgow Medical Journal*. In discussing "Three Hundred Consecutive Cases of Appendicitis," he says that it is not sufficient to make a simple general diagnosis of appendicitis, but that with care and experience the type of attack may be recognized and the line of treatment suitable to it decided upon. He recognizes that cases of general suppurative peritonitis, whether developing quickly or spreading from a local focus, require immediate operation. But "all the other types of acute appendicitis are best dealt with by the expectant method of treatment—unless a collection of pus points externally when it is opened—and operated on when pulse, temperature, and blood count are normal—that is to say, when they are in the quiescent stage." He says further: "If the presence of a local abscess is indicated by a high blood count the operation is postponed till it becomes normal or sufficient time has elapsed to allow the pus to lose its virulence; clinical experience has shown that this comes about in three weeks." In his opinion the teaching that a localized intraperitoneal abscess should be at once dealt with is

wrong and responsible for many deaths; this localized abscess should be given time to form adhesions to the parietal peritoneum. These opinions, in which Sir George Beatson finds little support from other surgeons of experience, he supports by his statistics. Excluding interval cases and cases with general suppurative peritonitis, in 164 cases, 69 of which had localized abscess, the death-rate was only 2.4 per cent. But Mr. Grey Turner's statistics on the other side seem equally convincing. In 130 cases of acute appendicitis with localized peritonitis the mortality was 2.3 per cent. Sir George Beatson's success is due in great measure to the fact that his cases are kept under highly-trained observation and very carefully nursed. But it cannot be ignored that if his views were generally accepted practitioners in family practice would be tempted to keep the patients too long at home, and so often to court disaster. If we were all possessed of Sir George Beatson's experience and ability to tell the type of attack, we might trust ourselves to see the patients safely through the present illness, but the family practitioner's first duty is to see the appendix case safely into the hands of the surgeon at the earliest possible moment. Then, again, the factor of length of illness must be taken into account. In Sir George Beatson's cases operation may not have been performed until three weeks after admission; by that time most cases leave the hospital.

It seems to us that Mr. Stiles's convincing speech at the Surgical Section in Liverpool carried the truth with it when he said that we must give up our old fear of the peritoneum, that the incision should be big enough to make sure of finding the appendix, *fons et origo mali*, and that in ether as anaesthetic, the Fowler position, and the administration of saline solution in the after-treatment we possess agencies powerful enough to combat and conquer the risks of immediate operation.

A NEMATODE IN RAT CANCER.

THERE can be no doubt that the investigations reported to the Medical Society of Copenhagen on January 7th, by Dr. Johannes Fibiger, Professor of Pathological Anatomy in the University of Copenhagen, are a very notable contribution to our knowledge of the etiology of cancer. It has, therefore, seemed well to publish elsewhere in this issue (p. 400) a full account of the observations recorded in a paper he published in the *Berliner klinische Wochenschrift* for February 17th; a further and fuller report is to be published later in the *Zeitschrift für Krebsforschung*. Meanwhile, however, the paper already published is sufficiently detailed to show that Professor Fibiger, by a long series of most careful and painstaking researches, during the prosecution of which it is clear he has been fully alive to the many sources of fallacy by which the subject is beset, has been successful in showing that a certain nematode, a new species belonging to the genus Spiroptera, has an intimate connexion with gastric carcinoma of the rat and that the cockroach is the intermediate host of this parasite. In discussing the results of his researches he cautions his readers against applying to man conclusions which he has proved to be highly probable for rats, and he observes that while some evidence has been brought forward at various times tending to prove that helminths may play a part in the causation of human cancers, this part may be quite a minor one, and that, in spite of the work of Klopsch in 1863, and of Langenbeck, Linstow, Babés, Groth, and Strandgaard, we do not yet know what the relation is between trichinae and carcinoma.

Professor Fibiger tells his story in a quiet and unsensational manner. It goes back to 1907, when he came across three rats from the same cage with marked papillomatous changes in the stomach which proved to be fibro-epithelial tumours, and were thought to be probably malignant, though attempts to transplant these tumours into other rats failed. On microscopic examination of the stomach of the three original rats he noticed in the epithelium of the affected parts round or oval spaces close to the stratum corneum. Some of these spaces contained small bodies presenting a complicated structure which suggested sections of a parasite containing eggs. Every one must admire the skill and patience with which Fibiger set himself to, as it were, reconstruct those parts of the tumours from his serial sections so as to ascertain the nature of these bodies. Eventually he was able to satisfy himself that what he saw were sections of a nematode about 1.6 cm. (about $\frac{3}{4}$ in.) long and about 0.25 mm. in diameter. The nematode contained eggs, and in the eggs were band-shaped embryos rolled up into a coil. His next step was to determine whether this gastric lesion in rats was rare or common. Upwards of 1,144 rats were examined; but although other stomach lesions and other parasites were found, the peculiar form of tumour and this special nematode were not met with in a single instance. He concluded that this gastric carcinoma was rare in Danish rats, and he succeeded in ascertaining that the three rats in which he had originally found it came from Dorpat. He argued that if the nematode had a causal relation to the disease it must have an intermediate host. Galeb had stated in 1878 that the common host of *Filaria rhytipleurites*, which infests the stomach in rats, was a species of cockroach, *Periplaneta orientalis*, and Fibiger accordingly turned his attention to this common object of the town scullery. His first experiments yielded only negative results. From rats in a sugar refinery infested by another kind of cockroach, *P. americana*,* however, he got positive evidence; 61 rats were caught, and in the fundus of the stomach of 40 of them nematodes were found, corresponding to those seen in the three original rats. In 18 of these 40 rats there were changes in the stomach which might be interpreted as due to an early stage of tumour formation, and in 9 cases there were tumours identical with those found in the three original rats. This confirmed the opinion that the association of the nematode with tumour formation was not accidental. He thereupon selected 4 wild and 53 laboratory rats which had not been in contact with cockroaches, and fed them on the American cockroach for from five to twenty-five days. Only 3 rats were found after death to be free from the nematodes, and 36 of the 57 showed changes in the stomach, while 7 of them presented tumours identical in character with those in the original three. He next sought and found the nematode in the bodies of the cockroaches. He found also that the other species of cockroach—*P. orientalis*—was easily infected with the nematode by feeding on the ova or on the excreta of infected rats. The embryos were found in the striped muscles of the protothorax and extremities of the cockroach.

The nature of the stomach lesion was studied in 118 rats, 61 from the sugar refinery, and 57 experimental animals. Spiroptera were present in 94, and

* *P. orientalis* and *P. americana* are two of the three commonest species of cockroach.

in 54 there were anatomical changes the extent and nature of which varied, possibly in relation to the number of parasites and to the duration of infestation. At any rate in four rats, which lived from 214 to 275 days after feeding on the cockroaches, the tumours had a carcinomatous structure. In two of the four there was metastasis in the lungs and retroperitoneal glands; in a third there was a tumour in the bladder, which may or may not have been metastatic. Nematodes were not found in the secondary growths.

If, as seems inevitable, we accept the conclusion that the nematodes stand in causal relationship with the tumours, the question how the parasite produces this effect arises. Professor Fibiger discusses the hypotheses that the nematodes act as carriers of a bacterial infection, or merely as irritants, but arrives at the conclusion that the facts he has observed are in favour of the hypothesis that the nematodes have a specific effect. This, he suggests, may be due to a toxic action, such as is known to be produced by other nematodes; one piece of evidence in favour of this view is the appearance of eosinophile cells in excess. If further investigations should establish the theory of a specific connexion between nematode and cancer, then Professor Fibiger's prolonged, ingenious, and careful researches will prove to have even greater importance than they can at present with certainty be held to possess.

THE INQUIRY ADDRESSED TO REGISTERED MEDICAL PRACTITIONERS.

THERE are doubtless many reasons why members of the profession, after the long and strenuous fight against heavy odds for the amendment of the conditions of medical benefit under the Insurance Act, should feel disinclined to answer more questions, but it is very desirable that all should answer the list of questions sent out by the British Medical Association about ten days ago. It is, we fear, too true, that the life of many medical practitioners has been made a burden by the recent excess of clerical work in the shape of signing "strawberry" cards, day-book entries, triple prescriptions, and all the other things demanded of the Act and regulations, and it is easy to appreciate the disinclination to incur further trouble. The regulations with regard to clerical work are now to be modified, and the amount will be reduced; and, in any case, this is not the time to give way to slackness, or to appear to encourage a policy of inactivity. It is above all things necessary that the profession at the present juncture should be alert, steady, and courageous, and do everything in its power to supply the information without which those who are watching over the interests of every member cannot act with the confidence which full information will afford. It is essential that the central organization of the British Medical Association should at an early date learn the views of those who are working the Act, and also the views of those who have not undertaken to do so. The necessary information can only be obtained if each man will do his duty in this respect, and every member can now help by sending in replies to the questions; they can be answered in a few minutes, and should be answered at once.

LOCAL MEDICAL COMMITTEES.

WE desire to call special attention to the resolutions of the State Sickness Insurance Committee of the British Medical Association adopted on February 20th, and printed in full in the SUPPLEMENT (p. 197). The Committee is anxious to obtain information with regard to the constitution and action of Medical Committees and the names of medical members of Local Insurance Committees, whether directly elected by medical practitioners in the locality or otherwise appointed. The Committee is anxious also to have information with regard to the action taken by Local Medical Committees, and reports of their proceedings will be published in the SUPPLEMENT. If received not later than Tuesday in each week, it will as a rule be possible to publish a report in the issue of that week.

NAVAL MEDICAL OFFICERS AND CORONERS' INQUESTS.

EARLY in 1909 the attention of the British Medical Association was called to an Order of the Admiralty, issued in June, 1907, prohibiting naval surgeons from accepting fees from coroners for evidence given at inquests and for making *post-mortem* examinations, although the officers were left under the statutory obligation to give such evidence and make *post-mortem* examinations when so ordered by a coroner. In April, 1909, the Association submitted a memorandum upon the question to the Admiralty, pointing out the anomaly and injustice created by the Order and the fact that a similar disability was not imposed on officers of the Royal Army Medical Corps. The Admiralty, however, declined to depart from its previous decision. No further action was taken until March, 1912, when, evidence being forthcoming that the Order was the cause of considerable dissatisfaction in the service, a further memorandum was sent reiterating the previous arguments of the Association in favour of the abolition of the Order and informing the Admiralty that it was causing quite unnecessary irritation to the officers concerned. In August, 1912, a revised form of the Order was issued, which stated that a naval medical officer attached to a naval hospital could accept fees for giving evidence or making a *post-mortem* examination if the death did not occur in the hospital. The Council of the Association thereupon made further representations to the Admiralty, expressing its appreciation of the fact that the authorities had shown their readiness to reconsider the matter, pointing out that the new Order contained quite unnecessary limitations, and urging that naval surgeons should be placed on exactly the same footing as other members of the medical profession. The matter has now been reconsidered by the Admiralty, and a communication has been received by the Association to the effect that although the Lords of the Admiralty are advised that the Coroners Act, 1887, does not apply to naval medical officers serving on His Majesty's ships, in order to avoid further controversy on the subject they have decided to reissue the Order relating to this matter in the following form: "When called upon under the Coroners Act of 1887 to act at an inquest, a naval medical officer may accept the usual fees tendered to him by the coroner for his services." Thus a source of grievance to the naval medical service, which though small was irritating, has been removed, and we may congratulate all concerned—those naval officers who, feeling it to be their duty to try to get this anomaly removed, made representations to the Association, the Association for its persistency, and the Admiralty for its frank recognition that the old position was untenable.

THE INDIVIDUALIZATION OF THE INEBRIATE.

IT has been urged by many who scarcely realize the nature of the material with which inebriate homes deal, that the results obtained by the homes are not commensurate with their cost. An American physician, Dr. Irwin H. Neff, in a paper[1] read at the International

[1] *The Problem of Drunkenness.* By Irwin H. Neff, M.D. *Boston Medical and Surgical Journal*, December 26th, 1912, p. 911.

Congress of Hygiene and Demography, held at Washington last September, maintained that the want of provision for segregating different types of inebriates explained the poor results. He describes the system adopted at the Massachusetts Hospital, with which he is connected. He regards drunkenness as a form of nervous weakness, not sufficient, however, to absolve the patient from working out his cure in co-operation with the physician. Each inebriate is a study; in each the personal equation is the dominant feature, and to throw inebriates together indiscriminately is to lose the opportunity for individual study. In Massachusetts the colony system is adopted. Cottages have been erected for "cottage grouping," and, with the exception of the receiving ward, the hospital and service buildings, or administration group, each building is detached and administered as a separate unit. Each patient having been studied in the receiving ward is drafted to the cottage group for which his temperament, social status, former mode of living, and the results desired from educational treatment fit him. Of those amenable to treatment not more than fifteen are grouped together. With a bigger group individual study and care has been found impracticable, although in the chronically incurable, the custodial group, twenty-five, are allowed. Dr. Neff claims that segregated colonies, though initially costly, are in the long run economical. It is cheaper to cure or care for an inebriate than to pay for recurring committals to prison; the sale of surplus farm produce secured by the labour of the inebriates provides revenue, and the greater part of constructional and repair work is undertaken by them. For twenty years Massachusetts has had an inebriates' hospital, and in 1911 land was secured sufficient for agricultural development, for industrial training and workshops, for segregation of diverse types, and for the treatment of both sexes. Dr. Neff's experience is that all of these objects are essential, and that the system is elastic, and permits of differentiation, segregation, and individualization. Moreover, committal to a hospital has none of the stigma of a prison sentence, whilst colonization and segregation of types facilitate the observation of contrasts in the cases, and supply what is most needed, opportunities for a scientific study of the problems of drunkenness. Dr. Neff's views are of considerable interest; his scheme is suggestive, and the profession, and especially those members of it who have to treat inebriates, will be interested to learn the results, and how they compare with those of other inebriate homes in helping to the solution of one of the most difficult of the problems which confront the general practitioner no less than the specialist.

GAUZE PAD IN PERITONEAL CAVITY.

THE somewhat lengthy annals of foreign bodies left in the peritoneal cavity are wholesome though melancholy reading to the surgeon, and Professor Doléris has reported[1] yet another instance of this unfortunate accident. The patient's first pregnancy had ended in November, 1909, in a miscarriage in the fourth month; then pelvic pains set in, and an operation was performed on November 16th, 1910. The left appendages were amputated, and the right ovary touched with the cautery. Lumbar pains continued to trouble the patient after convalescence. She became pregnant once more, and gestation went on without complication. Towards term the patient consulted M. Doléris. The head lay at the inlet, not engaged, and the fetus seemed very mobile, but the cervix was unaccountably high up behind the symphysis, and a tense, bulky mass filled Douglas's pouch. It was quite fixed, and simulated an adherent dermoid. On June 12th, 1912, pains set in, and on the following day Caesarean section was performed. The vertical incision through the uterine wall passed down along the placenta; the bleeding, however, was controlled, and a female infant, over 6 lb. in weight, delivered. The placenta was extracted and the uterine wound sutured. The uterus was then drawn forwards, and it was found that a sheet of false membrane united the back of the uterus to the colon, omentum, and loins. The surface was quite smooth, simulating normal peritoneum. The right appendages were small and healthy. On carefully opening the sheet by scissors after the liberation of some adherent bowel and omentum, a quantity of thick pus welled up, and a gauze pad was discovered, filling Douglas's pouch. When removed and laid out flat, it was found to measure nearly 6 in. in diameter. The inner surface of the sheet of false membrane, where it came in contact with the pad, was lined with fine granulations. Doléris, finding the conditions so different to what had been expected, removed the uterus and placed a drainage tube in Douglas's pouch. The patient's condition was bad for several days; a rash-like urticaria appeared on the second day, but disappeared within twenty-four hours. The right parotid gland became tender on the fourth day, but subsided; on the next day the fluid in the dressings was faecal, no doubt, Doléris admits, owing to damage of the rectal walls by the tube. A smaller drain was inserted into Douglas's pouch. On the ninth day, when the report was concluded for publication, the patient seemed to be doing well, but a little turbid fluid still issued from the drainage tract. It is remarkable that the forgotten pad gave rise to no symptoms until the end of the pregnancy. Many methods are practised by skilled operators for avoiding oversights of this kind. Wakefield of San Francisco suggests the employment of continuous fixed gauze sponges,[2] and has entirely discarded the use of loose sponges in abdominal surgery. He employs long folds of gauze each packed in a bag. One end is stitched to the bottom of the bag, the other is left free at the top; thus the fold forms a continuous sponge which is pulled out little by little as required. Two sizes are found to be quite sufficient. The sheet applied to the abdomen contains three pockets, one on either side at the upper border of the oval opening cut in the sheet for exposing the abdominal walls around the area of operation. Into this pocket is fastened the bag containing the broader sheet of gauze which is used for packing back the intestines or walling off local infective areas. In each side pocket is fastened one of the narrower strips which is used by the operator and his assistant for keeping the field clear of blood or doing any work where a sponge is needful. The pockets in the laparotomy sheet are much wider than the sponge bag, and the used-up part of the sponge is tucked away in the pocket, leaving a clean portion of the strip always under the operator's fingers ready for use.

[1] *Bulletin de la Soc. d'Obstét. et de Gyn. de Paris*, etc., 1912, p. 771.

[2] *Amer. Journ. of Obstet.*, October, 1912, p. 543.

HUMAN INFECTION BY DOG MANGE.

DR. A. WHITFIELD AND MR. F. HOBDAY, F.R.C.V.S., have contributed to the *Veterinary Journal* an interesting practical note on the transmission of the sarcoptic mange of the dog to man. It has long been known that this may happen, and the main point of the paper is to call practical attention to the fact that it occurs pretty frequently. The writers have seen seventeen cases, and Dr. Whitfield has met with five in ordinary private practice. All parts of the body may be attacked, the eruption produced being vesicular in type. The individual lesion is a very small and rather thin-walled vesicle, rather smaller than the ordinary eczema vesicle, and surrounded by a narrow zone of hyperaemia; the primary lesion, it is stated, is very like that of varicella, but of only about one-eighth the size. The lesions are scattered discretely over the surface, and in no case have groups or aggregations been seen. The scratching of the patient—for

the rash is intensely pruritic—leads to the decapitation of the little vesicles, and their original site then becomes covered with either a serous or a blood scab. No burrows are to be seen, and hence it is extremely difficult to find the actual parasite. Cats are subject to the same parasitic disease, and in a recent instance the transmitted disease in the human being was sufficiently characteristic to lead to a diagnosis in the cats, though the disease was not well marked in them; the diagnosis was confirmed by the demonstration of the acarus in a crust taken from one of the cats. The ordinary treatment for human scabies is quite efficient, and the disease shows less tendency to relapse, probably because the dog acarus does not form burrows. That there is considerable practical value in the observation is proved by the fact that in one of the five cases mentioned above as having been seen in private practice the patient had had the disease three times at short intervals. He had been treated for scabies, but inquiry showed that his dog had what was called eczema.

ARTERIO-VENOUS TRANSFUSION IN PUERPERAL HAEMORRHAGE.

SALINE transfusion has saved numerous lives without doubt, but it has its disadvantages, and is not prompt enough in its action when the patient is in a desperate condition from sudden loss of blood. Professor Oui, of Lille,[1] states that he has attended a large number of cases of flooding, and has often availed himself of intravenous saline injections. Yet they never in his experience produce the immediate change for the better in pulse and general condition which he has noted after arterio-venous transfusion. On that account he employed the latter in a recent case. A young woman who had borne five children to term, all delivered spontaneously, became pregnant once more, and symptoms of disease of the right kidney developed. Much pus came away in the urine. She was placed on the usual lacto-vegetarian diet and urotropin, and other antiseptic drugs were given, without any general benefit or improvement in the character of the urine, and anasarca of the lower extremities developed. The patient did not strictly carry out the prescribed dietary. Close on term a slight haemorrhage occurred, M. Oui, who was sent for, found the fetal head presenting; a quantity of blood and clot came away, and the membranes were ruptured. The head became well engaged in the pelvis, but the uterus grew bigger and harder. The head was delivered, but there was difficulty in disengaging the shoulders. At length the child, a big male, was delivered alive, but it soon died. Very copious flooding followed extraction; the placenta had become completely detached, and M. Oui emptied the uterus of clots, and threw a hot water injection into its cavity. The uterine walls immediately contracted; but the patient's condition was very bad. Ether, caffeine, and camphorated oil, and later 500 c.cm. of saline fluid, were injected. Only temporary improvement followed, and M. Oui determined to transfuse by the arterio-venous method. The patient was a lady living in a house over twelve miles from Lille. M. Oui telephoned for his colleague M. Lambret. While awaiting his arrival M. Oui administered alcohol freely, and injected camphorated oil and ether, but the patient became quite unconscious. When an hour and a half later Mr. Lambret arrived, the husband's right radial artery was anastomosed with the patient's right median cephalic vein. Local anaesthesia was employed for the husband. In about five minutes the patient's lips became coloured, the pulse was again perceptible, and the eyelids opened. The radial artery of the husband underwent spasmodic contraction occasionally, and the transfusion was continued for nearly an hour without any sign of syncope on the part of the giver. At the end of the administration of arterial blood the patient's condition had greatly improved. The pulse was 130. The anastomosed vein and artery were resected a little above the line of suture, and no contraction or coagulum could be detected. Convalescence was protracted. The symptoms of pyelonephritis continued, urotropine was given and albumen disappeared from the urine, but oedema of the lower extremities did not entirely subside. The patient went to the baths of Evian and returned free from oedema, and excreting perfectly clear urine. M. Oui states that his is the first case in which arterio-venous transfusion has been practised in France for *post-partum* haemorrhage. It should, he thinks, be performed unhesitatingly in very acute cases.

[1] *Annales de gynéc. et d'obstét.*, November, 1912, p. 647.

A BARBER-SURGEON OF TO-DAY.

THE association of shaving with surgery was not peculiar to the France and England of a few centuries ago, and it still persists here and there in semi-civilized countries. Thus Commandant G. Reynaud, in describing the way of life in Morocco to-day, says that the barber-surgeon flourishes there, in a humble way indeed, and on very modest fees. His tent is part of the picture of a Moroccan market. The nomad, from the nature of his mode of life, does not frequent shops, and a shop is an institution unknown to the ordinary Moroccan village of the more settled parts. Every household sends some of its number to market weekly, and the expedition seems to be the one distraction in the life of the women. Commandant Reynaud describes the market of Sok-el-had in the neighbourhood of Melilla. It draws the peasants from twelve miles round; the man rides the mule to market, the woman drives the laden ass. Some 2,500 families depend on this market, and its weekly turnover may amount to as much as £3,000. The market-place is not in a town, but in the open country, a bare patch some forty acres in extent, where the regular traders set up booths and tents for the day. Everything is sold, from mint tea to butcher's meat. Mint tea well sweetened, it seems, is a beverage in which the Moroccan is ready to indulge at any hour. In one part of the market are sheep for sale, and hard by sits a Jew in the classic kaftan and a black fez, with his collection of trinkets and brooches spread out before him; "a little further on the Moorish doctor squats in a small tent; he combines with his medical functions those of a barber, and shaves or bleeds indifferently. The fee for a consultation is one sou, but for blood-letting, which is a favourite remedy, four sous. Not far off is the temple of Themis, a wooden shed, where the Kaid sits to administer justice," and so on. In a recent lecture on the mysteries and crafts of Morocco, Mr. H. J. B. Ward, B.A., gave an account of the people illustrated by lantern slides, showing all the principal arts and crafts of the country, town architecture, markets, streets, and bazaars, with their sorcerers, snake charmers, and conjurors. He described the position of women, who are the playthings of the rich and the hard-worked servants of the poor, and concluded by a detailed account of the slave market at Marrakesh, one of the very few open slave-marts now left in the world. "Whether we agree or disagree with the general policy of the French in annexing the land of a people to whom they are totally antipathetic," he said, "every friend of humanity must rejoice at the inevitable sweeping away of such revolting spectacles as these."

SANITARY PROGRESS IN INDIA.

AN important blue book has recently been presented to both Houses of Parliament on the Progress of Sanitary Measures in India. It contains valuable information on the discussions and researches which have in recent years taken place in India, having in view the prevention of malarial and other destructive diseases, and the development of sanitary administration. It is impossible to

summarize within reasonable compass the 245 folio pages composing this volume, or to do otherwise than briefly indicate its contents. Most of the matters have, indeed, been noted in the JOURNAL from time to time. The first 97 pages are devoted to a full report of the "Imperial Malaria Conference" held in Bombay on October 12th to 18th, 1909, at which the subject was very ably and exhaustively treated in a series of papers and discussions, and resolutions regarding future action were formulated. The proceedings of a second meeting of the General Malaria Committee, held in Bombay on November 16th and 17th, 1911, are printed in succession, and indicate that the points mooted at the first meeting had received practical and useful attention. More extensive in scope were the transactions of the "All India Sanitary Conference" held in Bombay on the 13th and 14th of the same month. The subjects discussed at this conference were urban sanitation, congested areas and town planning, water supply, conservancy and drainage, rural sanitation, food supplies, adulteration of food and drugs, registration of vital statistics, water analysis, infantile mortality, plague and other epidemic diseases. This enumeration will suffice to show how wide an area of sanitary work these proceedings covered. Appended to the report of the conference are the reports and papers which constituted the foundation of the discussions. Finally, this Blue Book contains dispatches touching sanitary organization in India, the purport of which has been indicated in the JOURNAL at the time of their first publication. The contents of this volume by no means belie its title, and no better or more practical evidence of the sincerity and reality of the endeavours which the Indian Government is making in the matter of sanitation can be offered than the concluding sentence, which states that "during the preceding two years the imperial grants for sanitation have aggregated 181½ lakhs (£1,210,000), and for research work 15 lakhs (£100,000)." These grants were in addition to the very considerable sums expended by local governments, municipalities, and district boards.

THE BOARD OF TRADE AND SIGHT TESTING.

THE letter by Dr. F. W. Edridge-Green, published in the JOURNAL of February 8th, is well worthy of serious consideration. It will be remembered that a Departmental Committee was appointed in 1910 to inquire into the question of the sight tests as applied to seamen and engine drivers. Their findings were printed last year, and in commenting on them (August 17th, 1912, p. 390) the opinion was expressed that the report was not satisfactory, and that the measures recommended would fail to bring about any real improvement in the visual tests, especially those for colour blindness. Dr. Edridge-Green states that he has had the opportunity of examining the instruments which have been provided on the strength of the report. He finds that in the test for form vision the letters are "printed on canvas, to which a piece of wood is attached. In the normal position this rolls up at the bottom, and has to be held down by the examiner." Inasmuch as this can never really hang straight, it is bound to cause distortion, so that the possession of a certain amount of astigmatism by the candidate might be a positive advantage to him, and it would anyhow render the letters far more difficult to be read by a normal eye than if it were mounted on a stiff background. A distant test of this sort should be arranged so that each letter should form a known angle on the retina, but this would vary with the amount of concavity or convexity which must be present if such a sheet be kept rolled up when not in actual use. Any device more certain to give fallacious results would be difficult to imagine. The wool test, in spite of the modifications suggested, does not seem to have been improved, and as regards the lantern it is quite as bad as we predicted it would be when we saw its description in the report. There is no means of modifying the light, and the only lights it shows are white, red, and green, so that candidates would quickly get to know this, and a man must be very defective in colour vision to be detected by this means; further, the examiners are told to show the lights individually to the candidates before they are asked to name them; such a lantern used in this way could only bring this most useful test into disrepute. Evidently we cannot hope for any serious improvement at present in the results which the Board of Trade publishes of their vision testing.

THE HUNTERIAN FESTIVAL IN LONDON.

THE Hunterian Festival of the Royal College of Surgeons of England was celebrated on February 14th. In the afternoon the President, Sir Rickman J. Godlee, gave the Hunterian Oration, which is published in full elsewhere in this issue, and in the evening the President and Council entertained a large party of guests to dinner in the library. The guests, who were received by the President and by the Vice-Presidents (Mr. Edmund Owen and Mr. G. H. Makins), included the Presidents of the Royal College of Physicians of London, of the Royal Colleges of Surgeons in Edinburgh and in Ireland, and of the Royal Society, the Master of the Society of Apothecaries, the Presidents of the Royal Institute of British Architects and of the Institution of Civil Engineers, the Archdeacon of London, the Director of the Royal Botanic Gardens, Kew, the Directors-General of the Royal Navy and Army Medical Services, the President of the Law Society, the Treasurer of Gray's Inn and Lincoln's Inn, and the Masters of several of the City Companies. After the usual loyal toasts had been honoured and the memory of John Hunter had been drunk in silence, the toast of "The Visitors" was proposed by Mr. Makins, who, in a very happy speech, contrived to make reference to nearly every one of the distinguished persons present. The toast was acknowledged by Lord Justice Hamilton, who made the observation that the help of the medical profession to keep a man fit for his work was by many more highly esteemed than the success of its efforts to prolong life. Lord Reay, President of University College, in proposing the toast to Sir Rickman Godlee, said that the report of the Royal Commission on the University of London which was shortly to be issued would, he hoped, have the result of placing the higher education of London on a more satisfactory basis than it occupied at present. A brief response by the President brought the proceedings to an end.

ALIMENTARY TOXAEMIA.

ONE of the best marked tendencies of medical thought and observation during the last decade has been the disposition to attach increasing importance to the results of chronic infective processes in the alimentary canal. Efforts have been made to ascertain the etiological factors and to trace out the nature of the relation, if any, which the congeries of symptoms and disorders attributed to toxaemias originating from the alimentary organs actually bear to each other and to their assumed cause. Very many suggestions for treatment, ranging from intestinal antiseptics to more heroic methods, including some very drastic dietetic rules, have been made and put in practice. The subject certainly needs elucidation and is probably ripe for discussion; it will, we believe, therefore, generally be felt that the Royal Society of Medicine has done well to arrange a full-dress debate on it. It will commence on Monday, March 10th, at 5 p.m. On that day Dr. Hale White will open with a general survey. He will be followed by Dr. F. W. Andrewes, who will treat of the bacteriology of the alimentary canal, and by Dr. Vaughan Harley, who will

deal with the toxins of the alimentary canal; the consequences and treatment of alimentary toxaemia will be discussed by Professor Robert Saundby from the medical, by Mr. Arbuthnot Lane from the surgical, and by Mr. J. F. Colyer from the dental points of view respectively. The discussion will be resumed by Mr. J. B. Lawford on Monday, April 14th, at 5 p.m., and will be continued on succeeding Mondays.

We regret to record the death, on February 18th, of Sir Thomas Chavasse, consulting surgeon to the Birmingham General Hospital, and hope to be able to publish an obituary in a subsequent issue.

In memory of the late Sir William Allchin, Consulting Physician to Westminster Hospital and Physician Extraordinary to H.M. King George V, who died on February 8th, 1912, a brass tablet has been placed in the Hospital Chapel, and a replica of his portrait, painted by Sir Luke Fildes, R.A., and presented by Lady Allchin, has been hung in the Board Room, where it is believed many of his friends and former pupils will be glad of the opportunity of viewing it.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Vivisection.—On February 12th Mr. George Greenwood asked the Home Secretary a string of questions. The first referred to the memorandum signed by three of the Royal Commissioners on Vivisection in which they stated their opinion that the weight of evidence was opposed to the view that only administrative modifications were required in order to give effect to the changes which experience proved to be desirable in the law relating to experiments on living animals, and further expressed their doubt whether such modifications as were suggested in the report signed by all the Commissioners could be adequately carried out without legislation. Mr. Greenwood inquired whether legislation would be introduced in the next session of Parliament in order to give effect to such recommendations.—The Home Secretary said he had carefully considered the memorandum and the desirability of introducing legislation, and was satisfied that no legislation was necessary for the purpose of giving substantial effect to the recommendations of the Commission mentioned in the memorandum.

Mr. G. Greenwood next asked the Home Secretary whether, in view of the fact that the Cruelty to Animals Act, 1876, by statutory enactment divided the responsibility in regard to experiments on living animals, in the matter of the granting of licences and certificates to experimenters, between the Secretary of State and certain learned authorities, whereas the Royal Commissioners on Vivisection were unanimously of opinion that such responsibility should rest upon the Secretary of State alone, he would introduce legislation to amend the Act of 1876 in that respect.—Mr. McKenna replied that the majority of the Commission were of opinion that no change was necessary or desirable with regard to the present system of granting licences and certificates. He did not propose to introduce legislation on the matter. The Secretary of State had power to disallow or suspend any certificate, and the final responsibility, therefore, rested with him.

Mr. G. Greenwood also asked the Home Secretary whether his attention had been called to the recommendation made in the memorandum signed by three of the Royal Commissioners on Vivisection, and attached to the Report, that a provision should be inserted in the Act regulating experiments upon living animals, requiring all experimenters in every case in which obvious suffering of the animal had supervened forthwith painlessly to destroy such animal, and whether he would introduce legislation in order to give effect to such recommendation.—Mr. McKenna replied that the answer to the first part of the question was in the affirmative. The majority of the Commission were of opinion that the object in view could be sufficiently attained by means of the Secretary of State's power of attaching conditions to licences, and he was taking steps to carry out that recommendation. In the circumstances legislation appeared to be unnecessary.

Mr. G. Greenwood finally asked the Home Secretary whether, in the appointment of inspectors of places registered for the performance of experiments upon living animals, he would have regard to the recommendation made in the memorandum attached to the Report of the Royal Commission on Vivisection, and signed by Colonel Lockwood, Sir William Collins, and Dr. G. Wilson, to the effect that persons qualified in veterinary medicine and science ought not to be deemed ineligible for any of such inspectorships.—Mr. McKenna said that he considered that was a matter in which he ought to be generally guided by the advice of the majority of the Commission. He did not say that in no circumstances would he consider an application from a person qualified only in veterinary medicine and science, but he had invited applications from medical men, and he did not doubt that qualified candidates would be forthcoming.

Small-pox in Sussex.—Mr. Snowden asked the President of the Local Government Board, on February 12th, whether he would state the number of small-pox cases and deaths that had been notified at Newhaven within the last six months and the condition as to vaccination and revaccination of each case; whether a medical inspector had visited the locality and presented a report; and, if so, what was the sanitary condition of the locality in which the cases occurred.—Mr. Burns said that in Newhaven Urban District 18 cases of small-pox had been notified, all within the last four weeks (also 2 in the borough of Lewes, and 1 in the borough of Rye), making a total of 21. The outbreak had been inquired into by a medical inspector of the Board, in collaboration with the local medical officers of health. The condition as to vaccination of the patients was as follows:

	Total.	Stated to have been Vaccinated in Infancy.	Unvaccinated.	Revaccinated.	Died.
Cases under 10 years of age	5	0	5	0	3
Cases over 10 years of age	16	15	1	2	1*

* Stated to have been vaccinated in infancy.

The inspector reported that the houses in which the Newhaven cases occurred were in a somewhat overcrowded condition. The history pointed to the infection having been introduced from abroad by a sailor.

End of the Session.—The session of the House of Commons came to an end when the House rose on February 14th. The new session is to begin on Thursday, March 6th.

Dr. Herschel Harris, radiographer to the Royal Prince Alfred Hospital, Sydney, in a recent paper in the *Australasian Medical Gazette*, states that it is generally easy to detect hydatid of the lung with the fluorescent screen, but that a skiagram should also be taken, as a collapsed cyst may otherwise escape detection. It has been possible to detect a cyst no larger than a hen's egg, and the more difficult cases are those in which the whole side of the thoracic cavity is involved. Dr. MacCormick, of Sydney, had made the important observation that if the cyst be ruptured and partly full, the shadow with the patient in the upright position resembles that of a Dutch cheese with the top cut off, the horizontal part being uppermost—and this upper line remains horizontal, no matter at what angle the patient be tilted. Air is always present in the cyst. If the cyst be ruptured and empty, a crinkled shadow appears, due to the crumpled-up cyst wall. Sometimes considerable calcified areas are seen.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

WALES.

GIFT FOR A NEW PHYSIOLOGICAL LABORATORY IN CARDIFF.

At a meeting of the Council of University College, Cardiff, under the presidency of Lord Merthyr, on February 14th, the generous gift of £12,750 from Mr. W. J. Thomas, Ynishir, Glamorganshire, was accepted under the conditions which accompanied it. These were that a new physiological laboratory is to be built with the money in the Newport Road near the King Edward VII Hospital, and that the building is to commence within six months of the gift. The laboratory is, further, to be built by Colonel Bruce Vaughan, who was the architect of the King Edward VII Hospital. The Council of the College had met and considered the question previously, and had appointed an Accommodation Committee composed of those who were especially interested in the question of the new laboratory, and this committee had the advantage of the advice of Sir Isambard Owen, Vice-Chancellor of the University of Bristol. There were two currents of opinion with regard to the best site for the new laboratory. There were those who considered that it should be erected in Cathays Park with other buildings of the medical school near the university buildings. To this it was objected that the site was of insufficient extent, affording no room for future expansion, and that it would be a disadvantage to have the laboratory at a distance of about a mile from the hospital. Eventually, the opinion that it would be an advantage to have all the laboratories of the Cardiff Medical School close to the hospital prevailed, and in consequence, as has been said, the site in Newport Road had now been determined upon. Professor J. Berry Haycraft, who started an appeal for funds for the erection of a physiological laboratory less than two years ago, is to be congratulated on the success of his efforts. The munificent gift of Mr. W. J. Thomas will enable a beginning to be at once made and a laboratory to be erected which will meet the immediate needs of the Physiological Department of the Cardiff Medical School. No doubt in time extensions will be required, when it may be hoped that Mr. Thomas will find imitators.

LIVERPOOL.

THE ROYAL INFIRMARY.

The committee of the Royal Infirmary has decided to appoint an additional assistant physician, as well as filling up the vacancy caused by the death of Dr. O. T. Williams.

SANATORIUM BENEFIT.

The permanent scheme for the administration of sanatorium benefit in this area is now being formulated. It will make provision for all forms of treatment—domiciliary, dispensary, hospital, and sanatorium. Probably domiciliary treatment will be left in the hands of the general practitioner, who will have recourse to the tuberculosis dispensaries for consultation with specialists. These dispensaries will probably be formed in conjunction with the consumption hospital and the various general hospitals in the city. The hospitals will also undertake the indoor treatment of tuberculosis patients, and, if the provisional arrangements made with the consumption hospital may be taken as an indication, they will be paid 31s. 6d. a week for each person treated in the institution; of this sum 24s. will go for maintenance and the remaining 7s. 6d. to the medical staff of the institution. The available beds at the consumption hospital will be used for observation, the general hospitals for surgical tuberculosis, and the tuberculosis wards of the city infectious hospitals at Park Hill and Fazakerley for pulmonary phthisis.

Any scheme, however carefully drawn by the authorities, will require to be minutely studied by the profession if smoothness is to be attained in the working. It is hoped that the local Divisions of the British Medical Association as well as the Association of Hospital Physicians and Surgeons will have an opportunity of expressing their views on the scheme before it receives official sanction.

TUBERCLE BACILLI, HUMAN AND BOVINE.

Somewhat divergent views are held locally as to the relative frequency of these two types of bacilli in the production of human tuberculosis. At the last meeting of the Liverpool Medical Institution Dr. Nathan Raw brought forward some statistics and foreshadowed others supporting the opinion which has recently gained ground that surgical tuberculosis is for the most part due to the bovine type of bacillus, and pulmonary phthisis to the human type. Professor Ernest Glynn and others controverted this view, and invoked statistics in support of their contention. Doubtless the discussion will be renewed on the publication of the further statistics from Edinburgh, which are promised at an early date.

MANCHESTER AND DISTRICT.

MANCHESTER ROYAL INFIRMARY.

The annual meeting of the trustees of the Manchester Royal Infirmary was held on February 14th. A summary of the annual report was given in the JOURNAL last week, and in moving its adoption Sir William Cobbett, who presided, laid special emphasis on the references in the report to the financial position of the infirmary. With an annual deficit of about £8,000 it would, he said, be necessary to encroach on the capital. The endowment capital could not be touched, and if continual encroachments had to be made on the disposable capital, the position of the hospital would become one which he would prefer not to contemplate. He also made a special appeal for money to meet the cost of the new central branch for accidents and out-patients, which was estimated to be about £25,000. The report was adopted, and a vote of thanks to the honorary physicians and surgeons was passed, to which Dr. Broekbank replied on behalf of the honorary staff. The trustees then agreed to some revisions of the rules, the most important being a new rule providing for the addition to the medical staff of an honorary assistant aural surgeon, and the deletion of the old rule which provided for the payment by employers of domestic servants and apprentices of the sum of 10s. 6d. a week towards maintenance during treatment as in-patients. The meeting closed with a vote of thanks to Sir William Cobbett for his services as chairman of the board of management.

MANCHESTER SCHOOL FOR MOTHERS.

The School for Mothers was established primarily with the object of reducing the high infant mortality-rate, first, by giving instruction in the care, management, and feeding of infants and in general hygiene, and by providing meals at low charges for expectant and nursing mothers. There are at present four branches of the institution in Ancoats, Collyhurst, Openshaw, and Hulme, and at the fifth annual meeting, held on February 14th, it was stated that in the last year 2,057 persons had been members of the schools. The mothers attended regularly for the weighing of their infants, and the number weighed averaged 216 per week. The number of dinners served, at a charge of 2d. a head, was 10,216. The report of the Medical Subcommittee described the two special branches of the work carried on under its supervision. One is the ordinary work of the schools, which included medical consultations and investigations, and the other is the special investigation at Openshaw, where in two districts practically every infant is visited monthly during the first year of life with the object of observing the effects of expert advice on the infant mortality-rate. This inquiry will form the subject of a special report when sufficient figures are available. The feeling was expressed that it was important as soon as possible to establish additional branches, but the finances would not allow of this at present. It was estimated that the sum of £1 would rather more than provide for the care and supervision of one infant for a year. Dr. Niven, M.O.H. Manchester, said the schools were doing a most important work in assisting in lowering the infant mortality-rate, and the crowning part of their work had been the establishing of consultative centres where mothers could get the best medical advice.

LONDON.

LONDON COUNTY COUNCIL.

Ambulance Service for the Metropolis.

SOME discussion of the question of an ambulance service for the county of London took place at the meeting of the London County Council on February 18th, on a report that a coroner's jury, in an inquest on the body of a man taken ill at the Islington Empire music hall, had added the following rider to the verdict:

> The jurors are of opinion that a more up-to-date ambulance system is required in London, similar to the electric motor ambulance system of the City of London.

Mr. E. Smallwood reminded the Council that since the passing in 1909 of the bill promoted by Sir William Collins it had possessed power to provide an ambulance service. Such cases as that which had been notified by the coroner's jury were a disgrace to the richest city in the world.

Mr. H. L. Jephson, alluding to the recent decision of the Council to seek parliamentary powers this year to co-ordinate and utilize existing ambulance services (BRITISH MEDICAL JOURNAL, November 16th, 1912, p. 1419), remarked that authorities which now maintained ambulance services had no power to use them for other purposes than those for which they were established, and doubtless they were fully occupied in meeting present demands upon them.

Mr. Edward Smith mentioned a case at Clapham in which an old lady of 90, who met with an accident in the street, had to lie on the pavement for half an hour before any conveyance could be found, and had to be taken half an hour's journey in a hand barrow to the Bolingbroke Hospital.

Mr. Hayes Fisher, M.P., expressed the hope that, if the Government did not place further burdens upon the ratepayers, London before many years were over would have an efficient ambulance service.

From this point the debate drifted into the question whether Liberal or Conservative Governments had placed the greater burdens upon the ratepayers.

The Rev. J. Scott Lidgett inquired whether any steps had been taken to ascertain the extent to which other authorities were willing to co-operate with the Council in this matter. The specific duties for which these services were established must take preference in any co-operative scheme, and he was afraid most of the existing appliances were antiquated.

Mr. Cyril Jackson said there was a very large ambulance service in London which ought to be co-ordinated. It would be ludicrous to propose a scheme, for instance, which left the police out of account.

Mr. H. J. Greenwood, Chairman of the General Purposes Committee, which has the question under consideration, declared there was no better way of improving the ambulance service than by co-operating with and extending the existing services. A conference with the various authorities concerned would be obtained when the parliamentary powers asked for had been granted.

Mr. J. D. Gilbert, a member of the General Purposes Committee, said that he was not aware that it had been definitely decided to seek parliamentary powers this year, and there was a danger that no authority of the kind asked for would be obtained until the end of 1914. The Council had made no use of the powers it had possessed since 1909.

On a division the report was received by 57 votes to 45.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

LISTER MEMORIAL, GLASGOW COMMITTEE.

AT a meeting held last week of the Executive Committee of the Glasgow Committee of the Lord Lister Memorial, the Honorary Secretary reported subscriptions amounting to upwards of £770. In some cases no intimation had been given as to what proportion of the contribution was to be assigned to the local and international funds respectively. The local fund was to take the form of a suitable monument in Glasgow and the provision of whatever endowment might be necessary for the equipment and maintenance of a Lister Museum at the Royal Infirmary, should that prove to be practicable. The International Memorial Fund was intended to endow an international award to be given from time to time for the most notable contribution to the advancement of surgery in any part of the world, and the establishment of a Lister Research Fund with fellowships, scholarships, or grants for promoting investigations likely to improve surgery. A subcommittee consisting of Mr. A. E. Maylard, Sir Hector Cameron, Professor Teacher, and Mr. Hedderwick, was appointed to deal with the question of the equipment and maintenance of a Lister Museum in the Royal Infirmary.

PRESENTATION OF PORTRAIT OF PRINCIPAL SIR WILLIAM TURNER.

On Thursday, February 13th, the portrait of Sir William Turner, K.C.B., painted by Sir James Guthrie, P.R.S.A., was presented to Edinburgh University. Sir William Turner's connexion with the university over which he now presides as Principal and Vice-Chancellor, from the days when he acted as Demonstrator in Anatomy under Professor Goodsir all through the long and fruitful years of his own holding of the Chair of Anatomy down to the more recent time of his occupancy of the Principalship, extends to nearly sixty years. Born in Lancaster, receiving his medical training in St. Bartholomew's Hospital, London, and spending the rest of his life in Edinburgh, the Principal was particularly well qualified to guide the destinies of a university which draws its medical undergraduates from England almost as much as from Scotland. Sir Robert Finlay, K.C., M.P. for the Universities of Edinburgh and St. Andrews, in making the presentation, referred to the fact that it was in the days of the Crimean War that the subject of the portrait first came to be connected with the university, and many of the spectators, looking at the Principal, hale and hearty at over four-score years, must have felt it difficult to realize that it was even so. The Chancellor, Mr. A. J. Balfour, M.P., in accepting the portrait for the university, said the picture would serve in the future to let those who came after know something of the appearance of the man who had done so much for their university; but, he continued, "round about us, not far from this building where I am speaking, are many monuments of Sir William's administrative greatness; there are buildings, additions to the university, conveniences for teaching, all the apparatus of the modern university, which he has done so much to create, and in one sense they are his greatest and truest memorial; yet, ladies and gentlemen, I think we could ill spare a living and perpetual image of the very man who did it." Lord Provost Inches, whose presence by the side of the Chancellor was a reminder, if any such were needed, of the long connexion which had existed between the university and the city, spoke of the high place Sir William held in the appreciation of the Corporation—an appreciation which had recently taken form in the conferment of the freedom of the city upon the Principal of the university. Sir William Turner, in well-chosen and kindly words, replied, saying that "little did he suppose when he came to Edinburgh that Edinburgh would become his home, and it never would have become his home unless he had felt, when he became associated with the university, that there was something in the spirit of teaching in the university that loudly appealed to him. That something was the combination of the spirit of science with practical ability. Might that spirit always endure." With a few words from Sir Ludovic Grant came the conclusion of a very memorable ceremony. Edinburgh University has had some distinguished Principals, including Sir David Brewster, whose statue stands in the old quadrangle, and Sir William Muir, whose life-work was in that Eastern land so many of whose sons now come to Edinburgh for learning, but Principal Sir William Turner need not dread comparison with any of them.

ROYAL INFIRMARY, GLASGOW.

The annual meeting of qualified subscribers of the infirmary was of special interest, as it was the first held after the Insurance Act had come into full operation. During the last two months of the year especially there was a slight falling off in the subscriptions, both of the

general public and of the workmen. This had naturally caused the directors anxiety as it occurred at a period when trade was unusually good. In moving the adoption of the report, the Lord Provost, who is also chairman of the Glasgow District Insurance Committee, made it quite clear to the subscribers that the need of hospitals for the treatment of serious accidents and diseases was still as great as before the Act, which only secured such treatment as the ordinary practitioners could give. There would, therefore, be little change in the working of the hospital except in the out-patient department. In seconding the report, Mr. Hedderwick expressed the opinion that this diminution in subscriptions, however slight it was, was one of the first-fruits of the Insurance Act. He trusted the falling-off would go no further, and that on consideration the public generally would see the great need of maintaining the hospitals. Especially for the working men it was important to maintain the voluntary hospitals with their resources unimpaired as something infinitely better than any possible substitute. The net result of last year's working was that it had been necessary to take £5,184 from stock account to meet the deficit. With the sum of £4,800 spent on reconstruction, over £10,000 had been withdrawn from the stock account. The new year had, however, opened well with a donation of £15,000 from the trustees of the late Mr. Edward Davies, and it was decided to commemorate the splendid gift by naming two wards after the testator. Speaking of the reconstruction scheme, he alluded to the dangerous conditions in which the oldest part of the building had been found. Some people had criticized the delay in beginning the reconstruction, but, as a matter of fact, it had been profitable to delay, as the operations were begun when building was very cheap, and the accumulated interest had provided £50,000. The long delay in completing the reconstruction had been caused chiefly by the necessity of carrying on the full daily work of the institution. Consequently it had been necessary to reconstruct in three main divisions, two of which were finished and occupied in 1908 and 1912 respectively, while the last would be completed in the autumn of next year. It was subsequently agreed that, to remove apprehension on the part of the workers regarding the position of the infirmary since the passing of the Insurance Act, the following statement should be issued:

1. The hospital will give insured persons everything it has given in the past which the Act does not give.
2. Regarding in-patients subject to the rules and statutes, all insured persons will be admitted as in-patients as heretofore.
3. Regarding out-patients, all insured persons requiring special treatment will be treated as heretofore.
4. All insured persons suffering from serious accidents will be treated as heretofore.
5. All insured persons attending the out-patient or casualty department will be examined and treated if necessary for the first time. Such as, in the opinion of a member of the medical staff, are suitable cases for home treatment will be referred to their panel doctor for further attention; but hospital treatment will be continued for such cases as, in the opinion of the member of the medical staff, cannot receive proper treatment at home, or which require to be under further observation.

MEMORIAL TO THE LATE DR. SOPHIA JEX-BLAKE.

After the ordinary business of the annual meeting of the Edinburgh Hospital and Dispensary for Women and Children, on February 17th, Lady Helen Munro Ferguson, Vice-President, in the chair, a tablet to the memory of the founder of the hospital, Dr. Sophia Jex-Blake, was unveiled by Miss S. E. S. Mair. The tablet, which is in the hall of the institution, is of cast bronze, with the letters ornamented in relief. A simple wreath forms a border, and within this at the top are crests of Dr. Jex-Blake's family. The bronze is mounted on a slightly-moulded slab of Verde antique marble. Miss Mair gave a brief survey of the part Dr. Jex-Blake played in the admission of women to the medical profession in the founding and development of the hospital. The tablet bears the following legend:

In affectionate remembrance of Sophia Jex-Blake, M.D., founder of this Hospital, to whose large courage, insight, and constancy the admission of women to the profession of medicine in this country is mainly due.

THE WALDIE MEMORIAL.

The Waldie centenary memorial proposal, to erect a bronze mural tablet, suitably inscribed, on the house in Linlithgow, where Dr. David Waldie (who was associated in the discovery of the anaesthetic properties of chloroform) lived and practised as a surgeon and druggist, has now assumed definite shape, and the scheme is progressing satisfactorily, being supported by some of the leading men in the medical and chemical world; subscriptions have been received from New York, Calcutta, Aberdeen, London, Glasgow, Edinburgh, and Liverpool. Subscriptions, however small the sum, will be welcome, and should be sent as soon as possible to the Honorary Treasurer, Mr. John McWhirter, Union Bank House, Leslie, Fife, or to Mr. Alexander Spence, M.P.S., 43, High Street, Leslie, Fife.

MEDICINE AND LITERATURE.

In the report of Dr. J. W. Ballantyne's address on this subject which appeared in the JOURNAL of February 15th, p. 366, a printer's error was, we regret, allowed to creep in. The name "Wellesley" in the sixth line from the end of the paragraph should, of course, be Wesley.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

FRIENDLY SOCIETIES AND THE CONTROL OF DOCTORS.

MR. J. D. NUGENT, President of the Dublin Benefit Societies' Union, gave a timely warning to the medical profession in Ireland as to the position they must expect to occupy if medical benefit is extended to Ireland. Speaking at a general meeting of the Societies' Union on February 9th, he said that two important points had to be settled before the societies would agree to the medical benefits being applied to Ireland. First, they must get the £197,068 grant that was at present given to Ireland under the Medical Relief Act for Dispensaries; and, secondly, the societies must have the right to nominate or strike off the doctors from the panels. The societies and not the County Insurance Committees should have the control of the doctors. The doctors' terms should be made known and settled, and must include attendance on the wife and dependants of every insured person. The first of these demands means presumably the abolition of the Poor Law Medical Service and the end of the salaries of the dispensary doctors; and the second and third demands mean that the societies are to have complete control of the medical attendance on the members of their society, and that the great majority of the doctors throughout the country are to be placed completely in the power of the friendly societies. Now that the members of the profession are clearly warned it will be their own fault if they acquiesce in such a condition being brought about, and their thanks are due to the president's timely, though probably unintentional, warning.

MATERNITY BENEFIT AND DISPENSARY TICKETS.

The circular regarding the giving of dispensary tickets to women in receipt of maternity benefit, referred to last week (p. 366), has now been sent by the Local Government Board to the boards of guardians throughout Ireland. In it the Board emphasizes the duty of the guardians and relieving officers, before issuing tickets for free medical attendance and medicine, to satisfy themselves by careful inquiries that the applicant could not otherwise obtain this aid. The Board points out that in a number of cases it will probably be found that the recipients of maternity benefit under the National Insurance Act would not in addition be entitled to relief from the rates under the Medical Charities Act; but, on the other hand, there will no doubt be many cases of exceptional poverty with regard to which this view could not be maintained. The Board therefore expresses the opinion that a relieving officer or board of guardians, on being satisfied as to the existence of these exceptional circumstances, would be justified in issuing tickets entitling insured persons to dispensary relief, notwithstanding the fact that they were in receipt of maternity benefit under the Insurance Act. It suggests that guardians should try to make arrangements regarding the amount of the fees of the medical officer and midwife, bearing in mind that the 30s. is intended for the provision of other comforts besides medical attendance.

At the last meeting of the County Dublin Insurance Committee the following resolution on the subject of maternity benefit was unanimously adopted, and the Secretary was directed to send a copy to the Irish Insurance Commission:

> That the County Dublin Insurance Committee begs to draw the attention of the Insurance Commission to the grave danger which may arise in maternity cases where a nurse attending a patient fails to call in medical assistance in serious complications in proper time, fearing that the doctor's fee may have to be paid out of the maternity grant. The Committee feels strongly that the medical fee should be disbursed from funds other than those allocated for maternity benefit.

ULSTER MEDICAL SOCIETY.

At the fourth meeting of the session, the President (Dr. R. W. Leslie) in the chair, Mr. T. S. Kirk read notes and showed lantern slides of developmental bands of the mesentery. Dr. J. Campbell, Mr. Fullerton, Mr. R. J. Johnstone, Mr. Hick, Mr. Irwin, and Mr. Crymble all joined in a vigorous and spirited debate, and Mr. Kirk replied. Dr. C. G. Lowry read a paper on puerperal septicaemia occurring twice in the one patient, which was ably criticized by Dr. John Campbell and Dr. T. Houston, and Dr. Lowry replied.

On the evening of January 24th the President (Dr. R. W. Leslie) entertained the Fellows, members, and some friends at a smoking concert in the Medical Institute. The chief lecture room was used for the purpose, and was barely sufficient to hold the large number that accepted the kind invitation. Tea, coffee, and light refreshment were served, and some excellent songs, recitations, and sleight-of-hand exhibitions combined to make the evening successful. Every one appreciated the kindness and hospitality of the President, and manifested their enjoyment by hearty congratulations to him and frequent applause of those who so artistically helped.

Correspondence.

IMMEDIATE OPERATION IN APPENDICITIS.

SIR,—I have read with the greatest interest Mr. Owen's excellent address. There is, however, one point of view Mr. Owen and nearly all other surgeons overlook in their teaching on this point.

Mr. Owen scoffs, and I think rightly, at the "illustrious" physician; only (may I add?) there are very few such as he describes, at all events in London, and also, what is important, that no practitioner should waste time in calling in a physician except at the express demand of the patient, and then only with the understanding that a surgeon shall be called in in case of disagreement.

Mr. Owen speaks from the surgeon's point of view, and gives advice which ought to be followed out—namely, "When in doubt look and see"—but when he comes to himself what a falling off there is! If he thinks his feelings over he will perhaps understand better the feelings of the patient in doubtful cases. He calls in his surgical friend, and if he says, "Yes, I think your appendix is at fault," he asks leave for another surgical opinion. Why? What if the second opinion differs? Is there to be a third? No. If the surgeon answers as above he ought to be asked to operate at once, if only to look and see. The second opinion should only be asked for if the surgical colleague is in doubt and advises delay.

The third point of view, which is so often overlooked, is the point of view of the patient, which must affect his medical attendant, and in which the surgeon can help. And here may I suggest that Mr. Owen is a little wrong in comparing appendicitis with strangulated hernia? Taking his figures, the perfect recovery in the former, when not operated on, is about 30 per cent., while the vast majority of the remaining 70 do not die. In unoperated strangulated hernia practically all die. This brings me to the point I am leading up to. What is to be done when the head of a house (or one of his family) who is in good position socially but not financially, who lives up to his small income and has saved nothing, gets a slight attack apparently of appendicitis? The doctor advises immediate operation. He is asked, "What will be the expense?" The answer must be, even with a moderate surgeon's fee, "Anything between £50 and £100." The next question is, "If operated on, when can I go back to work again?" A sanguine reply would be six to eight weeks, but the patient is seldom himself again for at least three months. The last question is, "What are the prospects if I am not operated on?" Mr. Owen's statistics give the answer. Is it a matter of surprise that the patient says, "Doctor, you know my position. Even if I can raise the money—which I can't—I cannot spare the time. I will run the risk. When the second attack you talk about comes on, my position may be improved, and I may be able to spare the time and raise the money."

Nothing can be done as far as lost time is concerned, and the doctor must let the patient or head of the family decide, but the surgeon can help in the direction of fees. Many surgeons, even juniors, think it derogatory to take low fees, and send the patient to a hospital, if there is one, much as the patient may dislike it. On the other hand, I hold that, if he can trust the practitioner, the surgeon should be ready to operate at a considerable reduction to his ordinary fee, and the junior surgeon at even a nominal fee, without any fear of being looked down upon by his colleagues. And what I have said about appendicitis is more—much more—true about special operations which are in the hands of a few.

May I close this somewhat lengthy communication with short notes of a case which brings out the importance of Mr. Owen's "Look and see"?

A lad of very good but a very poor family was playing football at Vincent Square on a Saturday afternoon in perfect health, except for habitual constipation. On Sunday morning he had "colic." His mother gave him castor oil, which made him sick. I was called in the same evening. His temperature was 98.4°, his pulse 60. The abdomen was somewhat hard, as in some forms of real colic, and there was generalized pain. There was no tenderness, except very slightly on deep pressure in the appendix region. Nothing else abnormal. I was bold enough to prophesy "appendicitis." Early the next morning he was, when I saw him, "much better." The temperature was 98.6°, pulse 72; pain had gone, the abdomen was soft, but the tenderness in the iliac fossa was more distinct—quite marked—and there was very slight overlying rigidity. I asked and obtained leave to have a surgeon to operate if I could get one at a really reduced fee. Fortunately, I knew of one I could ask, and the patient was operated on the same afternoon, when a very tense, inflamed, banana-looking appendix was found on the point of bursting. He returned to his office just under three months.—I am, etc.,

Upper Clapton, Feb. 16th. J. W. HUNT.

THE REPORT OF THE COMMITTEE ON FRACTURES.

SIR,—This report was presented and discussed at the Liverpool meeting of the Association in July, 1912, at the Section of Surgery, of which I had the honour to be President. That particular (extra) meeting of the Section was the only one from which I was absent; but if I had been able to attend I should probably have felt bound to state briefly the opinion I have always held on the question of non-operative or primary operative treatment in simple fractures, without prejudice to the ability displayed in that report and in the discussion upon it.

But it would be impossible for me, or any one, to state that opinion better than, if even as well as, it is stated in the single column of this JOURNAL of February 15th, 1913, p. 370, in the letter of Mr. R. Hamilton Russell, of Melbourne.

My object in writing this is to express my admiration for the way in which the case is there put by him; the clearness of his exposition, the sound surgical and artistic principles underlying it, and his modest advocacy of the position.

If it can attract closer and more general attention to the whole of his letter, the quotation of the following paragraph will be justified:

> . . . Personally I have experienced great interest and learnt much that I deem of great value through habitually setting to work with my students over every case of fracture in the endeavour to

devise some simple and effective plan of treatment that will be of value to them when they go out into practice: and this, if I may be absolved from arrogance, is in my opinion just what a hospital surgeon and teacher ought to do. . . .

—I am, etc.,

RUSHTON PARKER,
Professor of Surgery in the University of Liverpool.

February 16th.

THE CONTROLLED THERAPEUTIC USE OF NEW TUBERCULIN.

SIR,—I am so pleased with the able paper On the "Controlled" Therapeutic use of New Tuberculin in the Treatment of Pulmonary Tuberculosis, which appears in the BRITISH MEDICAL JOURNAL for February 1st, that I cannot deny myself the pleasure of congratulating Dr. Rigg thereon, and expressing the hope that in future we may have reports of the results of tuberculin treatment cast on the same lines.

Any one with practical experience of the disease will admit that only limited—very limited—importance is to be attached to such statements as "patient feeling better," "patient looking better," "weight increased," and so on. With these improvements there may coexist stationary, or even advancing, lesions in the lungs. We are all sadly familiar with cases which improve in appearance and put on weight, and yet on stethoscopic examination are found to give evidence of pulmonary lesions *in statu quo*. And as these physical signs constitute the most reliable criterion as regards the progress of the cases- the most definite evidence on which a judgement may be founded—Dr. Batty Shaw and Dr. Rigg wisely selected them in measuring the results of tuberculin treatment.

Whilst signs of active disease in the lungs persist we cannot lull ourselves into the belief that all is well with the patient—however well he may look and feel—for an active lesion in the lung constitutes a breeding ground for the tubercle bacillus. No doubt, in such a case, when the temperature becomes normal and the weight increases and the patient feels better, we have some reason to congratulate ourselves in so far that we have evidence of the patient's powers of resistance having got the upper hand, and therefore we are justified in considering him *on the road* to recovery. But so long as there are physical signs of active disease in the lungs we know that the evil is still at work.

In ordinary sanatorium treatment, without tuberculin injections, it is a common experience to have cases rapidly improving in appearance, putting on weight, and in some cases showing improvement in the physical signs, or even leaving the institution with no signs of active disease.

We have reason, therefore, for being cautious in giving tuberculin credit for improvement in a patient's condition when that patient is at the same time having plenty of good food, rest, and fresh air. If tuberculin is a powerfully curative agent we may reasonably look for a marked improvement in the condition of the patient's lungs during its administration. Otherwise, to my mind, the verdict is "not proven."

I have used tuberculin—after Sahli's method (Beraneck's tuberculin)—but only in a very limited way, and therefore I have no personal opinion to express. I have a perfectly open mind with regard to the value of tuberculin injection. It may yet prove to be the most effectual means of controlling or arresting tuberculosis. But in the meantime medical opinion—even expert medical opinion—presents such a troubled sea of contradictory views, theories, and results that one welcomes a report such as that furnished by Dr. Rigg, founded on definite and measurable data.—I am, etc.,

JAMES W. ALLAN, M.B., C.M.

Bellefield Sanatorium, Lanark, Feb. 4th.

OPEN-AIR RIVER SCHOOLS.

SIR,—At the present time, when so much attention is being directed all over the country towards the prevention and cure of tuberculosis, especially at an early age, it must occur to those who are interested in the matter that, in the provision of open-air schools for children actually suffering from the disease, or who are daily exposed to the risk of acquiring it from tuberculous relatives, London lags far behind the provinces.

The great argument against such schools for the metropolis is the difficulty of providing the necessary open spaces in so large a city, and my object in writing is to offer the suggestion that that difficulty might be overcome by utilizing the river, mooring disused steamboats or converted barges in easily accessible reaches. Such a scheme could, I believe, be made a success not only from a health point of view, but also as an educational factor.—I am, etc.,

JAMES P. CULLEN, M.D.Lond., D.P.H.

Poplar Dispensary for the Prevention of Consumption, Feb. 12th.

THE SUPPORTS OF THE UTERUS.

SIR,—I must thank your reviewer for his kindly response to my submission that he is unduly agnostic on the subject of prolapse. But is it not possible to pay too much attention to the opinions of "authorities"? Some of them secure repute by bringing forward new work; others gain notoriety by defending views already hallowed by age. Their weight also varies.

Ballantyne says (*Essentials of Gynaecology*, page 2) that "Plato and the Arabians held curious views about the uterus wandering about in the body like a wild beast, and capable of being enticed into the vagina." But the modern uterus is tethered on either side by the parametric connective tissue. It has two broad, vascular, lateral pedicles. It forms the central portion of a sort of swing bridge which crosses the pelvis from side to side.

Gladly, then, let us turn, at the request of your reviewer, to the musculature of the pelvic floor; and let us ask if it really is, as authorities still maintain, "a most important matter in respect of prolapses."

If a bull is well tethered in a field which has a small gap in its hedge, you cannot let the bull out of the field by enlarging the hole in the hedge. You must loose the bull; then he will attend to the hedge.

Tearing the pelvic musculature does not loosen the connective tissue attachments of the uterus, and cannot bring about prolapse. But if the parametric swing bridge is relaxed, the loose uterus comes down and gradually dilates the vaginal orifice. If this has previously been enlarged by tearing, the loose uterus descends all the quicker.

If this is not sound pathology, how is it that we see women every day who have no prolapse, although their perineums have been torn into the rectum for years? The levatores ani have been stretched and thinned beyond recognition in other women who have no prolapse; and, in doing paravaginal section, we cut through the levator ani into the ischio-rectal fossa without loosening the uterus.

Though the nature and pathology of prolapse seem fairly clear, its cause certainly remains obscure. For who can say why one woman's uterus becomes loose after a single normal confinement, while that of another woman remains properly attached after a dozen?—I am, etc.,

Manchester, Feb. 17th. W. E. FOTHERGILL.

SIR,—Since my name has been mentioned in the discussion on this subject, may I say that the practical conclusions of my paper "On the Nature of the So-called Ligaments of Mackenrodt" are that it is impossible to differentiate without artificial means, namely, by removing piecemeal the superior portion of the parametrium, the lower border of this tissue, called by Mackenrodt the "ligamenta transversa cervicalis," and the remaining parametric tissue; in fact, his ligaments are artefacts? I agreed that the uterus was held in position by the parametric tissues. This fact was made little of by the reviewer, and he turns to the pelvic diaphragm. The attachments and relations of the uterus to the pelvic diaphragm are purely secondary, brought about through the intervention of the parametrium. The visceral aspects of the levatores ani muscles are covered entirely by parametrium. This consists of masses of smooth muscle, perivascular and perineural sheaths, together with blood sinuses and lymphatics. This tissue, originally undifferentiated mesoblast, runs in one continuous sheet round the uterus, bladder, and urethra. It undoubtedly forms the chief support of the pelvic viscera. As long as the parametrium is healthy, it is impossible for the uterus to come down.

I had the good fortune recently to perform a complete *post-mortem* examination on a female with procidentia. Fully two-thirds of the uterus, which was large, lay outside the body and the remaining third was in the vagina. The parametrium was stretched into two long ribbon-like folds; it was thin and scanty. The pelvic diaphragm was healthy and normal. Beyond an increase in the size of the vulval orifice, obviously mechanical in origin, no pathological changes existed. The musculature of the pelvic diaphragm *was well developed.* I have satisfied myself, and have specimens to demonstrate, that efficient colporrhaphies are successful only because they tighten up the parametrium, though some surgeons who practise these operations may not quite realize this.—I am, etc.,

MANFRED MORITZ.

The Anatomical Department, Manchester University, Feb. 17th.

THE NEGLECT OF VACCINATION.

SIR,—In the *Times* for February 1st a condensed report is published of the speeches at the annual dinner of the Association of Public Vaccinators,* from which it appears that the president (Dr. Arthur Maude) and the retiring president (Dr. A. H. Martin) made some strong remarks about the "red terror" which was some day going to overtake this country as a punishment for neglecting vaccination, and about the culpable responsibility of a Government which allowed such neglect to continue.

I write as a thorough believer in the efficacy of vaccination in protecting the individual (for a limited period), and I do not doubt the sincerity of Drs. Maude and Martin in their gloomy prophecies and denunciation. I venture to suggest, however, that these are, to say the least of it, rather ill timed at a period when, with steadily increasing neglect of vaccination, this country is showing a markedly increased success in dealing effectively with outbreaks of small-pox! One cannot help wondering whether these gentlemen, who talk so emphatically about the impossibility of dealing effectually with small-pox without recourse to infantile vaccination, have ever taken the trouble to make themselves familiar with the experience of Leicester, a town of 230,000 inhabitants, which has practically dispensed with infantile vaccination for the past thirty years, and which, in spite of all the positive predictions to the contrary, has dealt quite as successfully with small-pox as any other large industrial centre.

Have they considered, also, that infantile vaccination only protects (from attack) during the period of infancy and childhood, and that this period is the one least exposed (under modern conditions) to the danger of small-pox infection? Hence the remarkable fact, as yet hardly realized by pro-vaccinists, that in spite of increasing neglect of infantile vaccination, the relative incidence of small-pox mortality upon the age-period under 5 years, so far from increasing (as it ought to have done according to pro-vaccinist theories) has actually diminished!

One wonders, too, if these gentlemen have ever considered that our present system of infantile vaccination, which is not followed by revaccination, has one very serious drawback which (under modern conditions) probably goes far to neutralize, or even to more than neutralize, any benefit which might otherwise accrue from partial protection of the community? I refer to its undoubted effect in causing slight atypical forms of small-pox which are easily overlooked, and which thereby frequently lead to serious outbreaks of the disease, which outbreaks would not have occurred had the first cases been of the straightforward, easily recognized type which one usually finds in unvaccinated subjects. The serious outbreak in the East End of London in 1911—which was so successfully controlled by the prompt application of the same measures which have proved so effectual in Leicester—as also the serious outbreak last autumn in Kirkcaldy (the one causing over 60 cases with 8 deaths and the other over 40 cases with 13 deaths), originated in both instances in mild unrecognized cases in vaccinated subjects. I say advisedly that it is very probable neither of these outbreaks would have occurred, or at least would not have spread beyond the first few cases, had the persons first attacked in each case been unvaccinated. No doubt it would have been worse for those two individuals, but how much better for all those whose lives were sacrificed! These examples are very far from being exceptional.

If I may venture to give a word of friendly advice to Drs. Maude and Martin it is that they should bow to the inevitable and recognize, as many of us have now done for some time, that the occupation of the public vaccinator must be ranked as one of our dying industries. Happily for them the National Insurance Act has opened up fresh fields of useful and remunerative work. If, however, they have conscientious objections to "serving on a panel," let them enter the ranks of the Public Health Service, where I can assure them they will find ample scope for their undoubted abilities. If they still feel it their duty to prophesy evil and not good let them do so by all means, but let them point to sanitary reform, in its widest sense, rather than to the resuscitation of a system which, to all appearances, has had its day, as the proper course for the country to adopt if it really wishes to set its house in order. Of one thing I am confident, and that is that the future as regards small-pox prevention in this country lies with the medical officer of health rather than with the public vaccinator.

Personally, I am far from being satisfied that the "passing" of compulsory vaccination is a matter for serious alarm. If it leads to increased attention being paid to public health measures, as has been the case in Leicester, it may even prove a blessing in disguise.—I am, etc.,

C. KILLICK MILLARD, M.D., D.Sc.,
Medical Officer of Health.

Leicester, Feb. 11th.

* A report of the annual meeting and dinner of the Association of Public Vaccinators was published in the JOURNAL last week, p. 350.—Ed. B. M. J.

CHEWING GUM.

SIR,—A case having occurred recently in the North of England in which death was suspected to have been caused to some extent at least by the use of chewing gum, it appeared to me advisable to have samples of this article analysed. The following is the gist of the report received:

The samples are free from poisonous metals and actively harmful ingredients. They are compounded of a vegetable gum, known as chicle gum, which is allied in its nature to gutta-percha, with sugar and flavouring essences. The gum present in these samples to the extent of 17 to 25 per cent. is not actively poisonous or harmful chemically, but is quite insoluble and indigestible. The use of these chewing gums by children especially, who are likely to swallow the whole, is much to be deprecated, and should be discouraged by all available means.

Before taking any further steps I feel that I should have some definite evidence to put forward.

If, therefore, any of your readers have had experience of actual cases in which harmful results accrued from the use of these substances, I should take it as a great favour if they would communicate the facts to me.—I am, etc.,

H. KERR,
Medical Officer of Health.

Newcastle-upon-Tyne, Feb. 12th.

THE CONSTITUTION OF THE ASSOCIATION.

SIR,—I am perfectly convinced that you and Dr. Davy and the leader writer in the *Times* are wrong in thinking that the "referendum" of the Association last December, and the consequent vote of the Representative Body on December 21st, was not in accordance with the real opinion of the profession as a whole at that time. To argue to the contrary is to deny that the majority went on the panels against their will. Besides the voting at our Divisional meeting I knew the opinions of a fair proportion of those who were unable to be present. Doubtless other Representatives can say the same.

The fact is that when it came to the point we found ourselves unable to refuse service, except with the help of the contracting-out clauses, because we are so closely bound to our patients, whether insured persons or employers, by professional and economic ties. They had submitted to the Act; we, being a profession and not a trade, could not refuse them the benefits for which they had paid. We have not changed our opinion of the Act, but we have been forced, in our patients' interests, to abandon an untenable position.

Similarly I hold that the Representatives do represent their Divisions and are generally the best men available.

I do not understand that there is great competition for these posts, or that Representatives find great difficulty in ascertaining the opinions of men in their Divisions. Therefore I cannot see much advantage in altering our constitution as to the mode of electing and instructing Representatives.

But our constitution does require alteration in two particulars. Every one who attended the last three Special Representative Meetings must feel shame and amazement at the way in which we conduct our business. On January 17th we disputed for a whole day, at a cost to the Association of £1,000, and did not even succeed in recording the votes we came pledged to give. The agenda ought to be drawn up by the Council, and include such resolutions as will allow of a debate and decision on every point at issue, and neither amendments nor riders by Divisions or individuals should be permitted. Each resolution should be moved by a member of Council, who should make its import clear. The solicitor's opinion upon the exact import and validity of each resolution should be taken before the meeting is held. All questions, not points of order, should be submitted in writing. For a body of 250 men, skilled indeed in medicine, but profoundly ignorant of law, to frame, alter and redraft in a few hours a resolution which, when passed without anything deserving the name of debate, is intended to bind the whole profession, can only be called legislation by nightmare.

The whole matter is too big to be discussed in a single letter. I hope others will take it up and thresh it out in time to tabulate the necessary alterations for the Annual Representative Meeting. Could not the Council appoint a small subcommittee *ad hoc*?

If the procedure of the Representative Body is not reformed I fear that a good many of the most valuable members will find that they cannot afford the time and trouble involved in representing their Divisions in future, and the Association will relapse into the unrepresentative state from which this war aroused it.

The Representative Body should confine itself to debate and decision on broad questions of policy.

Greater trust should be placed in the Council, which should have executive powers in all details of policy.—I am, etc.,

P. NAPIER JONES,
Representative Reading Division.

February 17th.

SIR,—In your issue of February 15th, Dr. Lachlan Fraser demands that we (the British Medical Association) should, "no matter at what cost, transform ourselves into a strong trades union." This, it appears, is in order that we may "protect ourselves against our two natural enemies—the Insurance Committees and the approved societies." If one may judge from his letter, Dr. Fraser is himself one of those unfortunate members of our profession who have been driven, against their own inclination, on to the panel, and it must be obvious to anybody that, having once placed their necks under the yoke, the insurance doctors will now have no option but to form some big central combine in order to defend their economic interests against the inevitable exactions of their new task-masters. But, in the name of all that is best in the traditions of medicine, I protest against Dr. Fraser's proposal that the British Medical Association should be commandeered for such purposes; that this body, whose one essential and primary object hitherto has been the advancement of the science and art of healing, should forthwith be converted into an organization for protecting the financial interests of a section of the profession. Doubtless the doctors on the panel need to combine for self-preservation, and, by all means, if they feel like it, let them form a union *ad hoc*. But I hope that all members of the profession, whether on or off the panel, will clearly recognize that this is not the purpose for which the British Medical Association exists, and that if its machinery should ever be diverted from its present high social function to subserve such purely particularist ends, this would not only inflict another heavy blow on the prestige of medicine in this country, but would inevitably lead to the withdrawal from the Association of all those who still retain some sort of sense of proportion.—I am, etc.,

ARTHUR J. BROCK.

Edinburgh, Feb. 16th.

THE LATE CHAIRMAN OF THE CENTRAL ETHICAL COMMITTEE.

SIR,—In your current issue (SUPPLEMENT, p. 145) you report a resolution of the Council of the British Medical Association referring to the action of Dr. Lauriston Shaw in presiding at the inaugural meeting of the National Insurance Practitioners' Association. His dignified reply will satisfy all fair-minded men in the profession, but inasmuch as we were responsible for asking Dr. Shaw to honour us by presiding at the meeting, we feel that some statement from us is necessary.

It was evident to us that a considerable section of the profession felt that the situation was entirely altered when the final terms and conditions were announced by the Chancellor of the Exchequer in December, 1912, and which considered that the new conditions should be accepted, at least for a provisional period. The section of the profession which held these views had hitherto had little opportunity of giving expression to them. In order to support those in favour of working the Act, the National Insurance Practitioners' Association came into being. The course of events has amply justified the action taken, and there can be no doubt that the movement which was inaugurated at the meeting referred to was not only necessary, but obviously fair. We have carefully scrutinized the circular letter to which, apparently, the resolution refers, but we can find no expression whatever which would justify the pontifical action of the Council. It must be remembered also that at the meeting in question speaker after speaker, including the chairman himself, declared that the new association was not in any way hostile to the British Medical Association. Indeed, if the British Medical Association had been wise, there would not have been need of a Representative Meeting in January to reverse the decision of December.—We are, etc.,

H. G. COWIE,
Honorary Secretary,
National Insurance Practitioners' Association.
H. H. MILLS,
Honorary Treasurer,
National Insurance Practitioners' Association.

London, Feb. 18th.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—J. R. Bentley.
M.B.—D. N. Macleod.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on February 13th, Sir Rickman J. Godlee, Bart., President, in the chair.

Issue of Diplomas.

Diplomas of Membership were granted to ninety-eight candidates found qualified at the recent examination.

Diplomas of the Licence in Dental Surgery were granted to four candidates.

Diplomas in Public Health were granted, jointly with the College of Physicians, to twelve candidates.

Lister Memorial Fund.

The Council voted a sum of 50 guineas to the Lister Memorial Fund.

Primary Examination for the Fellowship.

The following recommendations of the Nomination Committee were adopted by the Council:

I. That Clause 7 of Section III of the Regulations relating to the Diploma of Fellow be altered from

> "7. Of having attended a course of Practical Physiology during not less than six months at a recognized Medical School"

to the following:

> 7. Of having attended at a recognized Medical School
> (*a*) A course of Experimental Physiology.
> (*b*) A course of Chemical Physiology.
> (*c*) A course of Histology.

II. That this alteration in the Regulations be made applicable to all candidates who are not Members of the College entering for the Examination in May, 1914, and for subsequent Examinations.

III. That two papers in Physiology, each containing four questions, of which the candidate must answer only two, be set, and that two hours be allotted to each paper.

IV. That the same arrangement be adopted for the written part of the Examination in Anatomy.

V. That these alterations with regard to the written papers be carried out at the next examination in May of this year.

Central Midwives Board.

Mr. Golding-Bird was re-elected as the representative of the College on the Central Midwives Board.

Bradshaw Lecturer.

Mr. G. H. Makins was chosen as the above lecturer for the ensuing collegiate year.

Gifts.

An offer was accepted, with thanks, from Lady Butlin, to present to the College a replica of the portrait of her late husband by the Hon. John Collier, which was exhibited in the Royal Academy a few years ago.

The Secretary reported that he had received from the executors of the widow of Mr. Caesar Henry Hawkins a portrait by Zoffany of Mr. Pennell Hawkins, Master of the Company of Surgeons in 1778, and great uncle of Mr. Caesar Henry Hawkins, the picture having been bequeathed by Mr. Caesar Hawkins to his wife for life, and after her death to the Royal College of Surgeons, with the direction that it should be placed near the picture painted by Hogarth of Sir Caesar Hawkins, Bart., brother of Mr. Pennell Hawkins.

Board of Examiners in Dental Surgery.

A vacancy occasioned by the expiration of Mr. W. A. Maggs's period of office on the above Board will be filled up at the quarterly Council in April, Mr. Maggs not being eligible for re-election.

CONJOINT BOARD IN ENGLAND.

AT a meeting of Comitia of the Royal College of Physicians on January 30th and of the Council of the Royal College of Surgeons on February 13th, diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the following ninety-eight candidates, who have passed the Final Examination in Medicine, Surgery, and Midwifery of the Conjoint Examining Board and have complied with the necessary by-laws:

K. B. Aikman, C. H. P. Allen, G. S. Applegate, C. V. Aserappa, S. G. Askey, M. Avent, G. Bailey, J. H. Bennett, P. T. G. Bergouignan, A. C. L. O'S. Bilderbeck, W. F. Blandford, M. F. Bliss, E. C. Bowden, P. J. Y. Brash, R. T. Brotchie, H. H. Brown, S. A. Burn, A. C Clifford, A. G. W. Compton, W. J. Cran, W. H. Dakin-Smith, A. B. Danby, F. E. Daunt, K. B. Dickson, P. G. Doyne, G. D. Eccles, E. A. C. Fazan, E. J. Foster, I. S. Gabe, N. Garrard, G. W. B. Garrett, H. C. Godding, E. M. Grace, B. Grellier, C. J. A. Griffin, F. A. Gunesekera, A. E. Halliran, W. E. Hallinan, S. H. Hay, A. M. Henry, F. M. S. Hulke, F. C. Hunot, T. J. J. Jeppe, D. W. John, R. E. Johnston, M. K. Joshi, W. H. Kauntze, K. J. T. Keer, F. H. Kelly, Merlin Kingsley, H. A. Lake, H. W. Latham, H. V. Leigh, F. G. Lescher, A. R. MacMullen, K. C. Mandana, H. H. Mathias, A. W. Matthew, L. M. J. Menagé, C. C. Messiter, A. G. H. Moore, O. G. Morgan, D. E. Morley, L. Page, J. L. Perceval, O. Pitt, C. H. G. Pochin, Lao Htin Poh, H. M. Pope, S. B. Radley, S. O. Rashbrook, L. N. Reece, Minerva Ellen Reid, P. Roux, J. A. Ryle, W. H. P. Saunders, B. E. P. Sayers, W. Simpson, R. W. Spence, C. M. Stallard, R Stansfeld, H. M. Stephenson, W. J. F. Symons, J. R. K. Thomson, M. L. Treston, H. de P. B. Veale, A. W. Venables, A. S. Wakely, H. F. W. Warden, H. A. Watermeyer, P. J. Watkin, C. A. Weller, E. W. Whiting, S. Wickenden, A. Wai-tak Woo, B. Woodhouse, W. W. Woods, L. D. Wright.

Diplomas in Public Health were conferred upon the following:

F. J. Ayre, H. Balme, Lieutenant Jamasp Cursetji Bharucha, I.M.S., Elsie Mary Chubb, W. E. Cooke, A. Ferguson, Captain C. A. Gill, I.M.S., H. Hilliard, Major J. E. Hodgson, R.A.M.C., Captain H. M. H. Melhuish, I.M.S., Captain A. L. Otway, R.A.M.C., P. Rose.

CONJOINT BOARD IN IRELAND.

THE following candidates have passed the examination indicated:

DIPLOMA IN PUBLIC HEALTH.—Captain T. C. Boyd, F.R.C.S.I., I.M.S., T. W. Conway, F.R.C.S.I., J. J. Cullen, L.R.C.P.and S.I., C. H. Denham, M.B.Dubl. Univ., Captain D. L. Harding, F.R C.S.I., R.A.M.C., J. O'Regan, L.R.C.P.and S.Edin., T. E. Rice, L.S.A.,* R. F. Williams, M.B.Univ. Camb.*

*Obtained honours.

Medico-Legal.

SANATORIUM BENEFIT.

Claim for Negligence.

AT the Lambeth County Court, before Judge Parry and a jury, an action was brought on February 17th against the Insurance Commissioners and Mr. J. A. Dawes, M.P., chairman of the Insurance Committee for the County of London, by the widow of an insured contributor who claimed £100 on the ground that she and her two children had suffered damage from the negligence of the defendants in wrongfully neglecting to provide sanatorium benefit for her deceased husband and a sum of 10s. a week for the maintenance of herself and her two children, to which they were entitled under the Act. The Commissioners set up the defence that the administration of sanatorium benefit was entrusted to the Insurance Committee and not to them, and that no case was maintainable against them in respect of any act or default of the committee in relation to sanatorium benefit. It was also alleged that no action was maintainable by any insured person against the Insurance Committee in relation to anything done or omitted by the Committee under Part I of the Act, and also that by reason of Section 8 of the Act no sum was payable in respect of sickness benefit or disablement benefit to the plaintiff's husband, and that the Insurance Committee was not guilty of any negligence or default, and that death was not caused or accelerated by any act or default of the Insurance Committee.

The deceased had been first seen by Dr. Mackeith on August 18th, and his diagnosis of pulmonary tuberculosis was confirmed at the Brompton Hospital. On the advice of Dr. Mackeith the patient's wife made application to the Insurance Committee, and was given two forms to fill up. On September 23rd, having heard nothing more, she again applied, indicating that she was depending for nourishment for her husband upon gifts from friends. Dr. Mackeith, on September 29th, reported that the patient required rest in bed, fresh air, and suitable nourishment. It was contended on behalf of the widow that her husband had been entitled to be treated under the Insurance Act and provided with extra nourishment, and that if he had been so treated the chances were in favour of his life being saved.

Dr. Mackeith, giving evidence, said that he did not regard the case as one for removal to a sanatorium, but that it should have been treated at home; he believed that the man might have recovered and returned to work.

Mr. J. A. Dawes said that the London Insurance Committee received a report on October 10th; the matter had first come before him on September 26th. The Committee could not do anything until they got the report of the patient's doctor and the insurance card.

It was submitted on behalf of the Commissioners that there was no case against them, and the judge ruled in their favour.

The case then proceeded as against the Insurance Committee. Dr. Priestley, M.O.H. Lambeth, said that the notification he received from Dr. Mackeith did not show that the case was urgent, and he had waited for the next meeting of the local subcommittee. In reply to the judge, he stated that nothing had been done by the local subcommittee to give the deceased sanatorium treatment.

The judge left the following questions to the jury: (1) Was the Committee guilty of negligent default in not providing suitable nourishment to deceased between September 29th and October 14th? (2) Did this negligent default cause the death of the deceased? (3) What monetary loss had the widow sustained? They answered the first question in the affirmative, the second in the negative, and fixed the monetary loss at £150.

Mr. Mathew, counsel for the Insurance Committee, asked for judgement on these findings, the jury having found that the man's death was not caused by negligence.

His Honour entered judgement for defendants with costs, stating that the jury's answers left everything in order for the widow to appeal.

CERTIFICATES BY UNREGISTERED DENTISTS.

AT the Wimbledon Petty Sessions on January 29th, Henry Ramage, manager to "Wilson's Dental Surgery," 43, The Broadway, and W. G. Morris were summoned at the instance of the British Dental Association for offences under the Dentists' Act, s. 3. Mr. Turner appeared for the prosecution, Mr. P. Robinson defended.

It appeared that the Surrey County Council, when selecting boys for their technical colleges, required medical and dental certificates. A doctor, finding that a boy's teeth were not in order, would give him a printed notice to consult a dentist. This notice specified that the certificate must be signed by a duly qualified and registered dentist. It appears from the report in the *Wimbledon Borough News* that a lad named Stone, having been so served, went to 43, Broadway, and saw the defendant, Ramage, who said that he knew all about such notices. The documents supplied by Ramage were rejected, and the Dental Association was communicated with. It was not alleged that the work done for the boy was unsatisfactory.

It appeared that Ramage was not a registered dentist. He admitted that he had signed a certificate, which had been handed to him by his secretary without any statement that the certificate must show the boy had been passed by a qualified and registered dentist. He also swore that he had never seen the education authority's form and would not think of signing it. A second certificate was issued by his secretary. He denied that Mr. Stone showed him the form.

The Chairman announced that the Bench had decided to convict and would impose a penalty of £2 and costs. He added that the dental authorities were perfectly right in taking proceedings in such cases.

In Morris's case, the summonses were not contested, and he was fined £2, being also ordered to pay £1 1s. advocate's fee on each summons and 8s. 6d. costs.

ON the suggestion of the High Commissioner for Cyprus, the Secretary of State for the Colonies has arranged that a visit shall be paid to the island during March by Sir Ronald Ross, M.D., K.C.B., F.R.S., late Professor of Tropical Medicine in the University of Liverpool. The object of Sir Ronald Ross's visit is to investigate the cause of the prevalence of malarial fever in the island and to advise in regard to the best means of combating the disease.

Obituary.

EDWARD ADRIAN WILSON, B.A., M.B.CANTAB.,

HEAD OF SCIENTIFIC STAFF, NATIONAL ANTARCTIC EXPEDITION, 1910.

THE manner of the death of Edward Adrian Wilson will make his name to be remembered as long as his countrymen keep their love of quiet courage and of the spirit of adventure. No one can read unmoved Scott's story of that last month which began for them about a year ago. The physical suffering, the mental tension as they struggled on from one store of food and fuel to the next, the growing uncertainty, the falling hope, the noble death of their sick comrade, whose fate must have seemed a forecast of their own, cannot but have tried even their courage. It did not fail and they struggled on, for, indeed, with one fine day, or even a better store of food and fuel at their last camp, they could have won through. Wilson had chosen a life of adventure and research in the field, and in this last venture to the extreme south, for which he was proud to be chosen, since the choice was a proof of the confidence felt in his qualities of heart and mind, he knew—no one better—the risk to be taken. He took it and lost, and would have been the last to murmur because death in early manhood was the lot of the loser:—

I love
The name of honour more than I fear death.

He was a type of man of which any profession may be proud. Simple, unassuming, quietly efficient, he impressed every one as a comrade who could be trusted wholeheartedly, one who would not fail at a pinch. He was born in 1872, the son of Dr. E. T. Wilson, Consulting Physician to the Cheltenham General Hospital. He was at school at Cheltenham College, and went up to Cambridge with an exhibition at Caius College in 1891. The fact that in 1894 he took a first class in the Natural Science Tripos (Part I) is proof of the early bent of his mind and of his ability. He would probably have wished to go on with natural science as a career, but he was not a laboratory student, and a field naturalist must have leisure or some definite calling. He therefore, as have many like minded before him, turned to medicine, and went through the usual course at St. George's Hospital, where his simple, honourable, straightforward character, genial humour, and artistic talent won him many friends. During this period he worked at the Caius College Mission, and to this possibly was due the breakdown of his health, for in March, 1898, he developed pulmonary tuberculosis. The disease was well marked and the diagnosis certain. On Dr. Rolleston's advice he went to Davos in November, 1898. Though he recovered slowly, he was quite free from any signs of active disease when he started on his first Antarctic expedition. He graduated M.B. in 1900, but the peril he had gone through no doubt confirmed his natural inclination to the life of an open-air naturalist. He got his chance when in 1901 Captain Scott, trusting his own judgement of his recruit's character and capabilities, gave gave him a berth as surgeon and naturalist on the *Discovery*.

Professor J. STANLEY GARDINER, F.R.S., of Cambridge, has responded to our request for some contribution to this biography by the following tribute to Wilson's character and life-work, which may properly be introduced here:

E. A. Wilson came up to Gonville and Caius College as a freshman in October, 1891, the present writer coming up at the same time. He quickly became known to all his year on account of his extraordinary enthusiasm for everything which he took up. Rowing always claimed him, and he represented his College in his three undergraduate years in both the Lent and the May boats. He was an interesting figure in many ways, for we were a quarrelsome year, and he was always the mediator trusted by all sides. Although always in the midst of whatever fun was going, he yet kept curiously apart, for he had a peculiarly strong sense of duty of what he owed to his parents, to his College, and to himself. His rooms showed his tastes, much of his spare time being given to sketching, while there was always a litter of skulls, claws and odd bones of animals lying around. We always felt that we could refer to him in any question of bones. He might not know the use or comparative morphology of the part, but he always knew what existed and what it was like. Wilson had no scholarship, but he obtained a First Class in his Tripos, and many of us felt that he ought to have been placed on the Foundation of his College.

Wilson's hospital work was noted for great thoroughness, but the chief change that the writer noticed in him at that time was an entire change in attitude, continual thought and inquiry as to the functions of all organs of the body in animals, together with a still greater interest in the habits of living animals. He developed greatly in other ways, and became tenacious to an extraordinary degree, and thought over his every action as to whether it was right or whether it was wrong. He became a strong man, one to whom his fellows looked up in their difficulties. Many of his hospital contemporaries owe much to him. Few really knew him, but all liked and respected him. At that time he was threatened with phthisis, about which then relatively little was known. I remember being told that his case was a bad one, but he was always cheerful about it, and ultimately, as we all know, completely recovered.

Wilson's chance came on the *Discovery* Expedition, to which he was appointed after some considerable doubt. Captain Scott told the writer that he was the life and soul of the party—the organizer of all amusements, the always good tempered and cheerful one, the ingenious person who could get round all difficulties; he knew no fear. To his splendid qualities and kindliness all his comrades have borne testimony. He made the mammals and birds his own, publishing two large sections upon them in the reports of the expedition. They are not mere dull lists, but reports of enduring value, showing everywhere throughout the personal joyousness of their author. What could be more expressive than his drawings of the young chicks of the emperor penguin, or more maternal than that of the mother seal with her week-old baby? One feels what the strain must have been on such a man to have left his newly married wife to go on that expedition.

For some years subsequently Wilson was engaged in working up his results, and his very beautiful and artistic sketches of ice and snow, and life in the desolate Antarctic. He was also engaged in illustrating phases in bird life. Later, we find him investigating grouse disease, as zoologist to the recent inquiry. His mind, however, was set upon the South Pole. He was certain that Scott would arrange another expedition, that he would get there, and that he, Wilson, would be with him. He laughed at the danger, but at times he showed that he was quite alive to it. He thought, though, that it was his duty to go. For himself he sought no end. He wished to be there to help his friend, and to show what Englishmen could do and dare. How nobly he accomplished his ideal is apparent to all. May the memory of his heroic end and of that of his companions become an everlasting and cherished memory of our race.

We have also received the following contribution from one of Wilson's contemporaries at Caius and St. George's:

I knew Wilson intimately both at Caius and St. George's, and of all the men I have known he stands out by reason of the beauty of his character and the highness of his aims. He was a deeply religious man, and as an undergraduate he lived a life of ascetic purity; but he was quick to make friends and to see good in the wildest undergraduate, for his purity was of the quality of flame, which need fear no contamination. With even the lighter-minded undergraduates he was immensely popular, for he possessed that certain passport to the College's heart—a vein of delightful humour. When a medical student at St. George's, he lived in the poorest part of London, in order that he might give his service to the poor. He was a hard worker at his profession; indeed, I believe it was his prolonged work at the pathology of tuberculosis that brought about the infection that caused him to give up a medical career for that of a naturalist. As a naturalist I think his chief interest was in birds. I remember once walking through a wood with him in spring; from every note we heard he was able to tell me not only the species but the precise occupation at the moment of the bird that had

uttered it. Once, when on a walking tour in the Hartz Mountains, he found a hawk's nest in a pine tree. He climbed the tree, took one of the fledglings, carried it with him for the rest of the tour, brought it alive to England, reared it, and made a pet of it. His love of birds was as much that of an artist as of a naturalist. He would wait for hours until he had got a bird in a characteristic attitude in order that he might draw it. His artistic gifts were great, and would, I believe, have brought him name and fame had he devoted himself to art. Of his achievements I leave others to speak; I will only say that no one could meet him without being the better for it, and that it falls to few men's lot to be so deeply loved by his friends.

On his return from the Antarctic in 1904 he spent some time in working up his observations, and published reports on the scientific results of the *Discovery* expedition and on the distribution of Antarctic seals and birds. During the period before he left England with the second Antarctic expedition in 1910 he did field work for the Grouse Committee, and as to this we venture to quote the following tribute in the *Times*, signed "A.E.S.," initials which may be identified as those of Mr. A. E. Shipley, F.R.S., Master of Christ's College, Cambridge:

Although I had known him as a pupil in Cambridge about the middle of the Nineties, it was not until the departmental inquiry into the diseases of grouse was established in 1905, under the chairmanship of Lord Lovat, that I really came to know him intimately. From the beginning of our working together I appreciated the fact that my colleague was a man of the very highest character. He was indefatigable in his work, absolutely unselfish, never thinking of his own reputation, but very keen to advance knowledge and achieve results, singularly modest, with a quiet sense of fun and humour; so that altogether he was an ideal man to work with.

Dr. Wilson was a quite remarkable field naturalist. Little that went on in the open escaped his notice. He could not only see things which the ordinary eye passes by, but he could perpetuate them on paper. He was an artist of no mean merit. Those who are happy enough to possess any of his Antarctic sketches, with their vivid representations of the white waste and the blue skies, will recognize this. But his greater skill lay in depicting animal life. The present edition of Bell's *British Quadrupeds*, now in course of issue, owes much to his accurate and artistic pencil; and the report of the Grouse Disease Commission owes much of its interest to the fine plates which he prepared.

Then, again, he excelled as a lecturer. I have never heard a more entertaining or a more informing discourse than one he gave on "Penguins" after his first visit to the Antarctic.

Wilson was a man of indomitable courage, one who never spared himself—characters that were appreciated to the full by Captain Scott. He was very simple in all his habits and very direct in his thought and address, loyal to his friends, staunch to any cause he took up. He had, in fact, the characters of the finest type of an English gentleman.

He leaves behind him a wife who has been awaiting in New Zealand his return for the last eighteen months.

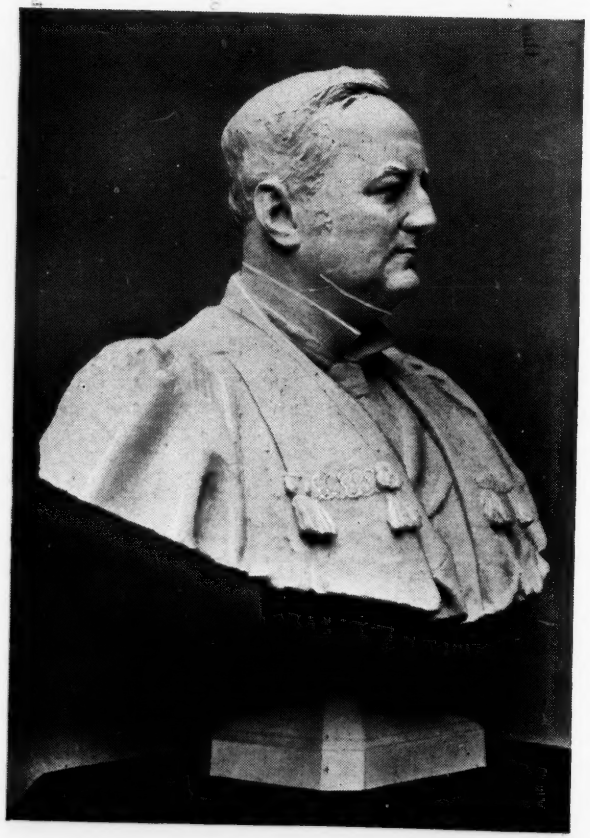
Lord Lovat, the Chairman of the Committee, in his introduction to the report published in 1911, wrote:

It is difficult to speak highly enough of Dr. Wilson's services, for not only was he an indefatigable worker in the field, but his ornithological knowledge, his scientific training, and his artistic skill, have been of the utmost value in every branch of the inquiry. Practically every grouse which was submitted to the Committee for examination was dissected and reported on by Dr. Wilson, and the results of these dissections, as shown in Appendix D, not only form a record of long and patient labour, but also provide an enormous mass of carefully arranged material which has been of great use to the Committee. Dr. Wilson has written or aided in writing ten out of the first fourteen chapters of the book, and has not only fully illustrated his own contributions, but has placed his artistic skill at the disposal of nearly all the other writers. In addition to his services as field observer and physiologist, Dr. Wilson conducted a series of experiments on live grouse at the Committee's Observation Area whereby the results obtained by Dr. Leiper, Dr. Shipley, and others were put to the test; these experiments entailed some years of hard and patient work, and required the closest co-operation with the other members of the scientific staff. Dr. Wilson's personal qualities secured for him the willing assistance alike of local correspondents and scientific staff, and went far to ensure whatever success the Committee has achieved.

The first paper contributed to the report by Dr. Wilson was on the change of plumage in the red grouse in health and disease. The frontispiece is a spirited drawing of the red grouse in summer with young chicks, and in twenty-one other drawings the variations in the plumage of the grouse of both sexes at various times of the year, and in the several varieties, are fully illustrated. Other papers in the volume by Dr. Wilson were on the food of grouse, based on an examination of crop contents, on the physiology and anatomy and the weight of grouse, and papers on the causes of mortality in the red grouse, and on grouse disease, written in conjunction with Lord Lovat and Mr. A. S. Leslie respectively. In the volume of appendices to the report Dr. Wilson wrote a full account of the experiments on hand-reared grouse carried out in the Observation Area, as well as the long report referred to above by Lord Lovat as Appendix D.

When the National Antarctic Expedition of 1910 was decided on, Wilson was appointed head of the scientific staff. The *Terra Nova* sailed from Cardiff on June 15th, and reached Simons Bay about two months later. Captain Scott joined at Cape Town, and the ship, after touching at Australian ports, went on to Lyttelton, New Zealand, where ponies, dogs, motor sledges, and some additional stores were picked up. She left New Zealand on November 29th, 1910, entered the pack ice on December 9th, and eventually reached McMurdo Sound towards the end of January, 1911. After some exploration work she returned to winter quarters at Lyttelton, and the expeditionary party were left to their own resources on the Antarctic Continent for the winter. Last year the *Terra Nova* went again to McMurdo Sound and brought news that the party on shore were, with the exception of Commander Evans, who was recovering from scurvy, in good health and spirits, and that Captain Scott and the southern party were remaining for another year to continue and complete the investigations which had been planned. In the work during 1911 Wilson took his full share. He brought to it many qualities which made him a valuable member of the expedition. He was a keen and accurate observer, and his skill as an artist enabled him at once to record his observations and impressions. He was an indefatigable collector also, and a good helpful, resourceful, cheery comrade. On the last expedition he would seem to have proposed, in addition to general work, to give special attention to three subjects: the development of the chick of the emperor penguin, the embryology of seals, and the identification of certain varieties of whales which he had reason to believe had not been recorded. With the first object in view he headed a sledge party which started for the penguin rookery at Cape Crozier in mid-winter (June), 1911; it was a fortnight on the outward journey, encountering temperatures of 70° below zero and even lower. On the slopes of Mount Terror the party spent three days in building a stone hut, which they roofed with canvas. Comparatively few birds were found in the rookery, but fortunately these had already begun to lay, and eggs at different stages of development were secured. The same night a violent gale commenced to blow, and a tent and other articles, though carefully secured, were blown away. The canvas roof of the hut, after straining for fourteen hours, was torn to ribbons, and for thirty hours or more the travellers were confined to their frozen sleeping-bags, half-buried in snow and fragments of rock. Only after forty-eight hours did the wind decrease so far as to enable them to get a meal. The party returned, after five weeks' absence, encased in ice and suffering from want of sleep, but otherwise well. When the darkness and the extreme temperatures experienced are remembered, this winter journey in the Antarctic will always remain a remarkable feat of endurance.

Wilson was one of the sixteen selected by Captain Scott for the South Polar party, which started on November 2nd, 1911, and was one of the four who accompanied their leader to the South Pole. His last letter to his father was written on January 3rd, just before the start on this final

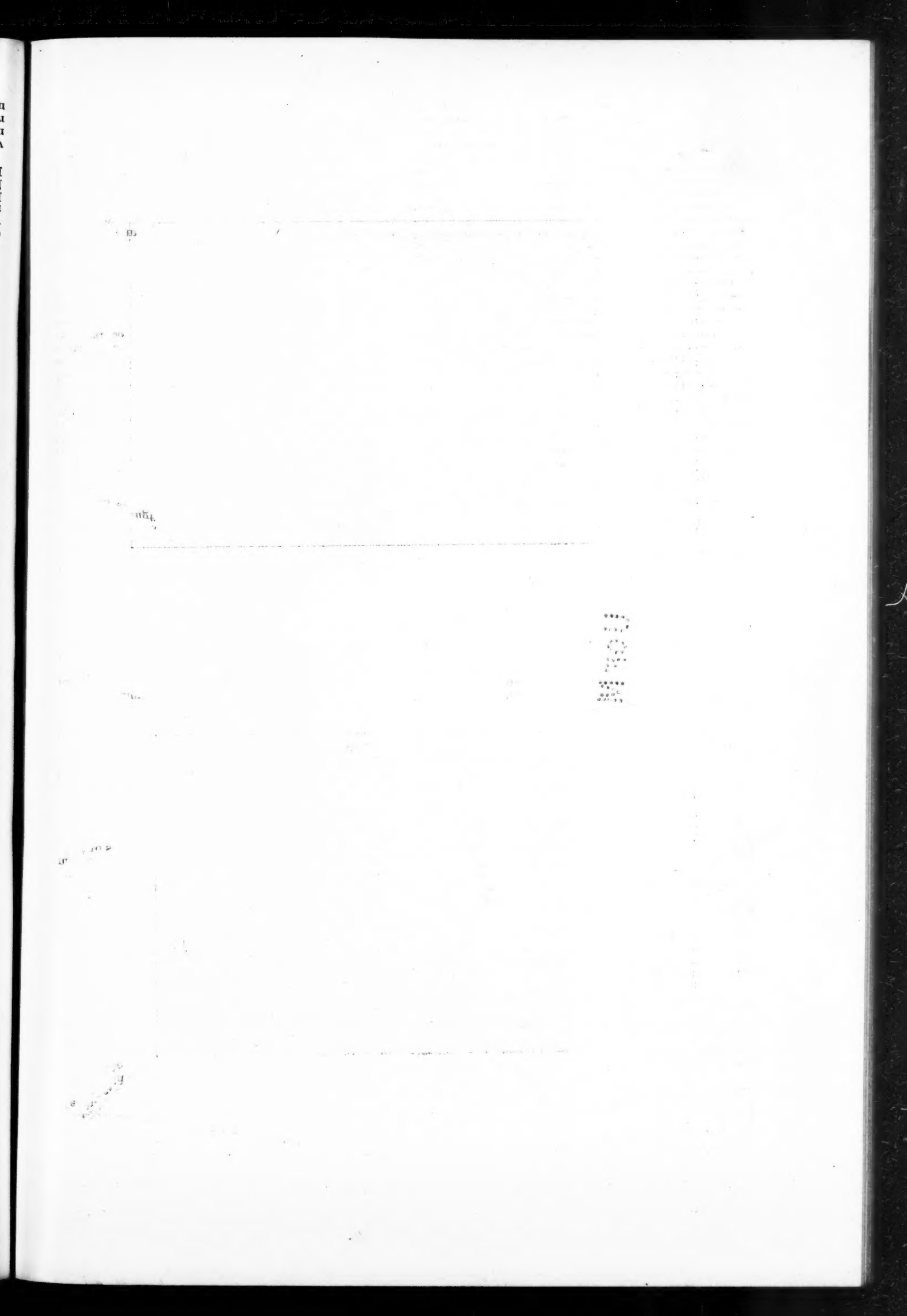


M. M. McHARDY.

(From a bust to be placed in the Royal Eye Hospital, Southwark.)

E. A. WILSON.

(From a photograph taken by his father.)



stage of the expedition. "I am fit and strong," he wrote, "and am just glad for all your sakes that I am one of the party for the Pole. We shall be at the Pole in less than a fortnight and back at winter quarters in the middle of March." Though the object of the whole expedition was scientific, every one of the party hoped that the Union Jack would be the first national flag to be planted at the South Pole, and it must have been a disappointment to that hope when they found that Amundsen had anticipated them by a few weeks. The cause of the delay in the return journey was twofold—the unusually inclement weather, the breakdown first of one member of the party and then the illness of another. The final catastrophe seems to have been determined by the failure of food and fuel during a prolonged blizzard. The bodies of the three men—Scott, Wilson, and Bowers—were found in their tent by the Southern search party on November 12th, 1912. Surgeon Atkinson and his companions gathered the records and effects of the dead men, read the burial service over their bodies, and erected a cairn and cross to their memory over the inner tent in which they were buried. We may hope that they will be allowed to rest there, and that the idea of bringing the bodies home may be abandoned. "Surely," as one who has a special right to speak has said to us, "it would be better, a thousand times, to let them sleep on amid the eternal snows with their great achievement as their noblest monument."

Dr. Wilson married immediately before his first journey to the Antarctic, and for more than a year his wife has been waiting for him in New Zealand. He leaves no children, but to his widow, to his father, and other members of his family the sympathy of the whole country has gone out.

A memorial service to Dr. Wilson was held in the Parish Church at Cheltenham last Sunday afternoon, and on the same day the Principal of the College preached to the boys on the text "Be thou faithful unto death." There is to be a special memorial service in the College chapel next month, on a day near the anniversary of Wilson's death.

It is satisfactory to be assured that all the scientific records and specimens collected by the party are safe, and it may reasonably be hoped that among these records will be notes and sketches by Dr. Wilson.

MALCOLM MACDONALD McHARDY, F.R.C.S.EDIN.,

LATE OPHTHALMIC SURGEON TO KING'S COLLEGE HOSPITAL.

IT is with the greatest regret that we have to announce the death at Dumfries, on February 8th, of Mr. McHardy, late Ophthalmic Surgeon to King's College Hospital.

Malcolm Macdonald McHardy was born on March 15th, 1852, at Springfield, near Chelmsford, Essex; he was the sixth son of Admiral J. B. B. McHardy by Horatia, daughter of Admiral Pascoe, and grandson of Nelson's famous flag-lieutenant. He was educated at the Royal Naval School, then at New Cross, but subsequently removed to Eltham, in Kent; he left that institution at the age of 17, and was entered as a medical student at St. George's Hospital, and from that time forward entirely supported himself by his own earnings as an assistant, until he obtained the diploma of M.R.C.S.Eng., in 1873. He held several junior surgical appointments, being assistant house-surgeon to the Leicester Infirmary, house-surgeon to the Belgrave Hospital for Children, ophthalmic assistant and registrar to St. George's Hospital, surgical registrar to Charing Cross Hospital, and clinical assistant to the Royal Eye Hospital, Southwark. He thus obtained a practical and thorough all-round training before he specialized in ophthalmology.

He made a voyage or two in the ss. *Kongs Sverre*, and in 1877 was admitted a Fellow of the Royal College of Surgeons of Edinburgh. In 1878 he was appointed surgeon to the Royal Eye Hospital, Southwark. To his efforts was mainly due the rebuilding of that institution, which, by his devotion and untiring energy, was remodelled and raised to its present high level of efficiency. In 1880 he was elected Professor of Ophthalmology in King's College, London, and surgeon to King's College Hospital.

Among his many writings and lectures the following were the most noteworthy: "On the operative treatment of immature senile cataract and its artificial ripening by massage"; on "The application of the electro-magnet in the removal and diagnosis of iron and steel chips from within the eye"; "A new self-registering perimeter"; "A case of double black cataract"; "The treatment of primary glaucoma by iridectomy"; "On the prognosis of albuminuric retinitis"; and "On localized tuberculosis of the choroid"; he edited the fourth edition of *Wells on Diseases of the Eye*, with an original ophthalmoscopic atlas.

McHardy was a master of many handicrafts, his father originally intending to make him an engineer, and this mechanical bent helped to raise him to the position of distinction and usefulness that he subsequently occupied in eye surgery. He was practical to his finger-tips, and his originality and resource were of that cool and calculating nature mostly to be found in engineers.

For thirty years McHardy was to be seen at the Royal Eye Hospital, treating the poor with as much devotion and consideration as he would his most valued patient in private, twice a week, and for six and seven hours at a stretch, and often until nine o'clock at night, with that light-hearted, genial, breezy manner of his that endeared him to his patients. It was said of McHardy's patients that they would wait hours to see him, without grumbling at the waiting. This was true, and largely due, not only to his sympathetic, kindly way of treating their ailments, but because he also had a good knowledge of most trades and occupations, so that he was able to converse with them on the ins-and-outs of their work, which greatly pleased them.

He was very thorough in examining his patients, and made most careful and complete notes of his cases. The two hospitals at which he worked contain piles of his valuable notes and comments, and he thus built up that storehouse of facts which, with his natural aptitude for the work, made him a thorough ophthalmic diagnostician.

McHardy was a most beautiful operator. All who ever studied under him, whether English or foreign, bestowed the highest praise upon his consummate skill and dexterity. His ability to ripen an immature lens by trituration, without causing iritis, etc., was very great, and somewhat unusual, since the operation is not in general use.

He was, it is said, the first operator systematically to draw up into, and leave in, the angle of the wound a strand of iris stroma, free from pigment, during the operation for primary chronic glaucoma, with the avowed object of obtaining a filtration cicatrix. This he was doing in the early nineties of the last century, with considerable success.

The self-registering perimeter which he invented in 1882 has held its position for thirty years. It is a masterpiece of mechanical construction, and was as ingeniously thought out as it was well made.

A man of fine physique and a good athlete, McHardy was a striking personality. He spoke in a brusque and forcible fashion, and needed to be studied to be understood. Beneath the rugged surface there was a large and kindly heart. Whoever needed a lift got the helping hand of McHardy freely extended to him, and his home at Margate was always at the disposal of any poor student at King's who might need a change of air. He was very generous to the poor of Southwark, and his hand was for ever in his pocket. He served on several philanthropic bodies, amongst which was the Society for the Promotion of the Welfare of the Blind. In worldly possessions he had little and wanted less; for he was self-sufficient, and easily satisfied with few personal belongings. Patients flocked to him in private as they did at the hospitals. He made money, but did not keep it. His house at Margate was a curiosity—the rooms were more like the cabins of a sailing ship, with little furniture except the bare necessities of daily life, and "no superfluities to cumber the place." His was an individuality of that clear, defined, strong type that to attempt to model would have been to attempt to spoil; and although all could not acquiesce in all of him, yet a few more fearless expositions to the world of a personality true to itself, unmasked by the cloak of convention or deceit, such as was his, would be all to the benefit of humanity.

The funeral took place at Dumfries on February 11th, and amongst those present at the graveside were representatives of the staffs of King's College Hospital and the Royal Eye Hospital. A memorial service

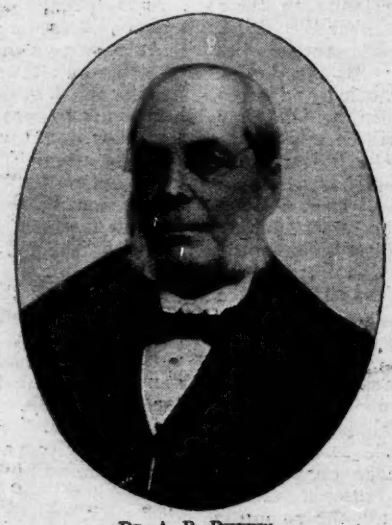
was held at the same time in the chapel of King's College, London, at which many of his former colleagues and students were present.

ALFRED BAYNARD DUFFIN, M.D.Edin., F.R.C.P., F.R.C.S.,

CONSULTING PHYSICIAN TO KING'S COLLEGE HOSPITAL, AND EMERITUS PROFESSOR OF MEDICINE, KING'S COLLEGE MEDICAL SCHOOL.

We regret to announce the death of Dr. A. B. Duffin, which occurred on February 10th at his residence in Wallington, Surrey, at the age of 79.

Alfred Baynard Duffin was the son of a general practitioner in London, and was educated at King's College, London, and at the universities of Edinburgh and Berlin. In Berlin he came under the influence of Professor Virchow, and acquired the interest in pathology which was later to colour all his clinical and teaching work. He became M.R.C.S.Eng. in 1855, and graduated M.D.Edin. in 1857. In 1858 he was House-Physician at King's College Hospital under Dr. George Budd, Dr. Todd, and Dr. George Johnson, and often spoke of his experiences in the old building which preceded the present King's College Hospital which itself is about to be abandoned for new premises in the south of London. He became Assistant Physician to the hospital in 1860, at the same time as Dr. Edward Liveing and the late Dr. E. Symes Thompson. He did not become Physician to In-patients until 1874, and during the latter part of this long service in the out-patient room he gave up one afternoon a week in seeing out-patients with skin diseases; his teaching in this subject was much appreciated by the students. In 1876 he succeeded Dr. Lionel Beale as Professor of Pathological Anatomy, and in 1893 he was elected to the Chair of the Principles and Practice of Medicine. After working alone for a few years, he shared the duties of the Professorship with Dr. Burney Yeo, who succeeded him when he became Professor of Clinical Medicine. He was an active member for many years of the Committee of Management of King's College Hospital, and on retiring in 1898 from active service on the staff of the hospital he was made Consulting Physician and Emeritus Professor of Medicine. He was also an Honorary Fellow of King's College, London.



DR. A. B. DUFFIN.
(From a photograph taken by and published with the permission of Mr. C. B. Tabourdin.)

He was elected a Fellow of the Royal College of Physicians in 1873, was a member of the Council from 1894 to 1896, and was an examiner in medicine from 1869 to 1902. He was also an examiner in medicine at the University of Edinburgh. He took the Fellowship of the Royal College of Surgeons of England in 1859, and somewhat prided himself on being one of the few physicians practising medicine who possessed this distinction. For many years he was physician to the Church Missionary Society, and he was also examiner for various insurance societies. He was at one time a pretty regular attendant at the meetings of the Pathological Society and of the Clinical Society of London, and although he never published any of his lectures in book form, he contributed several articles to the *Transactions* of these societies, to the *King's College Hospital Reports*, and to the medical press. We are indebted for the above particulars to a former student and colleague, who adds the following tribute to his memory:

As a teacher Dr. Duffin's pupils remember him mainly for the readiness with which he imparted the fruit of his large store of experience and reading. A random question from a student in the wards often led to an informal lecture of considerable length, delivered with great fluency and rapidity. He was one of the most kindly of colleagues, ever ready to take broad views on matters under discussion, and very tolerant of differences of opinion. Owing possibly to his somewhat retiring disposition, he scarcely attained the professional recognition which his energy and work appeared to merit, but he made many firm friends, and was always ready to advise those who wished for guidance in professional difficulties.

Dr. Duffin never married, but devoted his life to the companionship and care of an invalid relative. During the time that he lived in Devonshire Street he was a constant attendant at Holy Trinity Church, Marylebone, being a man of strong religious convictions.

Dr. Frederick Wright, J.P., of Stamford Bridge, Yorks., died on Saturday, January 25th, in his seventy-seventh year, after a long and painful illness. Mr. Wright had long been recognized in Yorkshire as a leading authority in all matters pertaining to agriculture. He was the son of Dr. John Wright, and was born in Stamford Bridge in October, 1836. He was educated at Knaresborough Grammar School and Edinburgh University, and joined his father in practice after completing his professional education. "T'owd doctor," as he was affectionately called by his friends and neighbours, always enjoyed, like his father before him, the complete confidence of the farmers. He devoted all his spare time to the cause of agriculture, beginning by the establishment of the Derwent District Agricultural Club, the forerunner of several similar institutions in the same part of Yorkshire. He predicted only a few years since that the young farmer who is content with rule-of-thumb methods will not find landlords ready to accept him as tenant, for this is the day of scientific tilling. Mr. Frederick Wright worked hard till a few months ago, when his health failed, and towards the end of January his condition became hopeless. He leaves a son, Dr. Cyril Wright, of Towcester, Northants. According to the deceased doctor's own desire, his remains were incinerated at the Lawnswood Crematorium, Leeds, and afterwards the ashes were interred at Catton Church, near Stamford Bridge; several agricultural clubs sent representatives, and the attendance was very large notwithstanding the inclemency of the weather.

It is with regret that we announce the death of Mr. Henry Sutcliffe, which occurred on January 29th at Bournemouth, where he had resided since his retirement from general practice. He was born at Heptonstall, in Yorkshire, and commenced his medical career, when 18 years old, by being apprenticed to the house-surgeon at the Huddersfield Infirmary. He afterwards studied at University College, London, and obtained the diploma of M.R.C.S.Eng. in 1861, and that of L.S.A.Lond. in 1862. Shortly afterwards he was elected house-surgeon to the Bradford Infirmary. In 1864 he commenced general practice in West Bromwich, and was appointed district medical officer to the West Bromwich Union. When the West Bromwich District Hospital was opened he was one of the three surgeons first elected. He took great interest in the business part of the institution, and was elected on the board of management. He was a careful and successful operator, and when he resigned was appointed on the honorary consulting staff. He was a member of the British Medical Association. As a town councillor of West Bromwich he did useful work, and for some years was chairman of the Sanitary Committee. As a justice of the peace for the borough he was regular in his attendances on the Bench until failing health caused his retirement. His decisions were marked by justice tempered with mercy. His death, which happened rather suddenly from heart failure, will be deplored by his old patients, his medical friends, and the inhabitants of the town where he had practised for so long a period.

THE death is announced of Geheimrat Dr. JULIUS BAUMGÄRTNER of Baden-Baden. He expired on February 11th, at the age of 76. He was born in 1837 in Freiburg in Breisgau, and he received his medical education in the university of his native city; he distinguished himself in valuable work in the field of physiology. He then went to Paris and studied in the cliniques of Chassaignac, Nélaton, and Maisonneuf, and in 1862 came to England, where he attended the hospital practice of Baker Brown and Spencer Wells, and afterwards passed on to Dublin and Edinburgh. In 1863 he settled in Baden-Baden, and during the Franco-German war took charge of a hospital for French prisoners in Rastatt, for which he was, after the peace, rewarded by the Société de Secours aux Blessés at Paris, which bestowed on him its Croix d'Honneur. In 1879 Dr. Baumgärtner held the office of General Manager of the fifty-second meeting of German Naturalists and Doctors at Baden-Baden. He became one of the best known medical authorities at Baden-Baden, acquired friendships with numerous foreign visitors, and founded an excellent sanatorium in 1891. He died greatly loved and respected, and his funeral service was largely attended. It was held at the Friedhof Kapelle, well known to English visitors and residents.

Medical News.

THE annual meeting of the County of London Branch of the British Red Cross Society will be held at Grosvenor House on Friday, February 28th, when Viscount Esher will take the chair at 4 p.m.

AT a meeting of the Hunterian Society at St. Bartholomew's Hospital on February 12th the President, Mr. A. H. Tubby, being in the chair, the annual oration was delivered by Dr. Edward W. Goodall on serum sickness.

A MEMORIAL to the late Dr. C. J. Allan of Lasswade, subscribed by the inhabitants of the district, was unveiled in Lasswade churchyard on February 8th. The memorial takes the form of a Celtic cross in granite. The Rev. R. Montgomerie Harris, who presided, made reference to Dr. Allan's valued work for nearly half a century, both professionally and as a member of various boards and institutions.

THE county-court judge stated the other day at the Newcastle County Court that he had recently received at the Gateshead Court a medical certificate, printed and initialled, stating that the man was unable to follow his employment owing to the death of a friend. The judge told the applicant he was addressing that a certificate presented to the court must be properly signed and not printed. That it should be properly signed is obvious, but that it should not be printed is an *obiter dictum* which could probably not be sustained if it were shown that a doctor kept a series of printed certificates to meet different conditions frequently recurring.

THE first of a course of six lectures on "National Eugenics" was delivered by Professor Karl Pearson on Tuesday evening, February 11th, in the Botanical Theatre of University College, the subject chosen being the effect of heredity, environment, and parental habits upon the welfare of the child. Despite all that had been written and said to the contrary, Professor Pearson reiterated the opinion that feeding and environment were of comparatively small importance, for the healthiest races were by no means necessarily those who lived under the best hygienic conditions. Statistical evidence proved that in the manufacturing towns of the north the most reproductive classes were not those of good health and good habits, but that the race was being carried on to a far greater extent by men and women of bad health and bad habits. The problem before the nation at the present moment was, therefore, how to encourage the right kind of potential parent to marry and bring up children. In his opinion, the money which was now being spent on insurance and old-age pensions would be better employed to give a differential advantage to those who possessed good health and practised good habits, and who were thus endowed with the qualifications necessary to carry on the race.

THE annual meeting of the Association of Certified Dispensers was held in the Court Room of the Apothecaries Hall, Blackfriars, E.C., on February, 6th. The financial statement showed a satisfactory balance to the credit of the association. The annual report stated that the association had continued its work on behalf of the members in general, but the question of the long looked for by-law was still unsettled, and the proposed bill on behalf of dispensers still waited a suitable opportunity to be put before Parliament. Mr. Howell, who had recently qualified as a pharmacist, then gave in his resignation of the post of honorary secretary, and on behalf of the members was presented with a gold watch by the chairman, Mr. Montagu Smith, who said that the success of the association was due to Mr. Howell's untiring efforts. Mr. Howell was elected an honorary member for life. Mr. A. Mowbray Upton, Clerk to the Society of Apothecaries, also referred to the services of Mr. Howell to the association and to the correct attitude which had been maintained between the association and the society. Mr. Montagu G. Smith and Mr. A. L. Anderson were unanimously re-elected chairman and treasurer respectively, and Mr. F. E. Trayner (Hackney Infirmary), of 13, Carlton Road, Manor Park, E., was appointed honorary secretary.

THE first Conference of the Eugenics Education Society is to be held in the Large Hall of the University of London on Saturday, March 1st, when over five hundred head masters and mistresses will meet to discuss the question of introducing into the usual school curriculum a certain amount of judicious instruction on the subject of racial responsibility. There is to be a morning and an afternoon session. The former will be opened by the president of the society, Major L. Darwin, with a paper on "The Eugenic Ideal." This paper will be followed by others dealing with the difficulties of introducing eugenics into elementary schools, and the best means of overcoming the obstacles presented by ignorance and prejudice; and the session will close with a discussion on this subject opened by Miss Faithful, the Head Mistress of Cheltenham Ladies' College. In the afternoon the Head Master of Eton will read a paper on "Racial Responsibility as a Factor in the Formation of Character," and Professor J. Arthur Thomson, of the University of Aberdeen, will open a discussion on the ways and means of introducing the eugenic ideal into schools. It is proposed, should the general feeling of the audience at the close of the meeting appear to be in accordance with the suggestion, to pass a resolution requesting the President of the Board of Education to receive a deputation to ask that an inquiry should be held "as to the advisability of encouraging the presentation of the idea of racial responsibility to students in training and children at school." The papers read at the conference, together with a summary of the discussions, will be published in *The Eugenics Review* of April 15th.

A. ULRICH (*Muench. med. Woch.*, Nos. 36 and 37, 1912) points out that much difficulty has been experienced since the idea of limiting the chlorides in the diet of epileptics, and substituting bromides, was introduced owing to the fact that the treatment must be continuous, and must therefore be of a kind that the patient will take with appetite, and that will not tax the ordinary kitchen. If the diet is rendered too poor in chlorides, the patient may become highly susceptible to them, and any increase in quantity may induce fresh epileptic attacks. Ulrich starts by withdrawing all salt from the soup, which he states means a reduction of from 10 to 20 grams daily. If this is well tolerated the salt used in cooking other food is gradually reduced until a further 5 to 12 grams is got rid of. As soup without salt is unpalatable he uses tablets consisting of 1.1 gram of sodium bromide, 0.1 gram of sodium chloride with extractives of vegetable albumen, fats, and spices. One tablet, weighing 2 grams, with 1 to 2 decilitre of boiling water makes, he says, an excellent soup. All his patients liked it, and appetite had been well maintained. He calls the tablets "sedo-tablets," and they can be obtained from Hoffmann-La Roche and Co. Other flavourings can be added to the soup provided they contain no common salt. He maintains further that when given in this way the bromide acts more powerfully than when administered in the ordinary fashion. The dose given was 1 or 2 tablets a day, increased to 3, and for severe cases to 4 or 5. If bromism occurred he waited to see if the symptoms diminished without altering the medication; if they got worse he lowered the dose, but found it necessary to stop the bromine altogether for a few days in rare cases only. In some cases it was found expedient to continue the bromides and to give at the same time from 1 to 5 grams of chloride extra for a few days. Hans W. Maier (*Muench. med. Woch.*, September 3rd, 1912) has tested the method in the psychiatric clinic of the University of Zürich in 20 cases for four months, and expresses himself distinctly in favour of it. He found that it did not disturb digestion. The result in his cases was good, and no case of bromism was observed.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated,*

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.: those concerning business matters, advertisments, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

FAIRLANDS asks for suggestions for the relief of attacks of rectal pain which have occurred during the last two years in a man, aged 62, suffering from tabes; morphine gives only temporary relief.

R. (West Indies) asks for advice in the treatment of a patient, aged about 21, of European parentage, who has been suffering from granular pharyngitis and post-nasal catarrh for about a year. The mucous membrane of the middle third of the roof of his mouth is pale and wrinkled at the sides, and sensation is lessened.

DR. WILLIAM HARDMAN, of Bispham, near Blackpool, who has been struck by Dr. Laing's statement (p. 280) that the patient in the case there described suffered a sensation of stomach dropping as a result of the heavy blows received as a prize-fighter, asks what is the state of professional boxers who have followed that occupation for some years.

ANSWERS.

SARTORIUS.—We believe that it is not customary to put an assistant's brass plate up alongside that of the principal; such a proceeding might be interpreted as implying that the assistant was in fact a partner.

LETTERS, NOTES, ETC.

PROVERBIAL MEDICINE.

DR. WM. BRAMWELL (Liverpool) writes: With reference to my note in last week's issue; in consequence of my not having received a proof for correction, which was the printer's fault, and my being a somewhat illegible writer, which is my own fault, there were misprints in the passages relating to my quotation from Homer, which should have read as follows:

"It is Hector's rebuke to his mother because she offered him wine when he made that short visit to his home in order to induce his brother Paris to return to the battle—

Μή μοι οἶνον ἄειρε μελίφρονα, πότνια μῆτερ,
Μή μ' ἀπογνώσῃς, μενεος δ' ἀλκῆς τε λάθωμαι.

(Do not raise wine, that cheers the heart, to me, revered mother, lest thou unnerve me, and I forget my might and my vigour.)"

With reference to my illegibility of handwriting, which I am anxious should be an excuse for the printer, it may interest him to know that it has got me into trouble on more than one occasion. But in one instance at least I have reason to believe it proved of great service to me; for in the physiology paper at T.C.D., it turned out, to the astonishment of my friends, that I had gained the highest marks of my year. The secret, however, was divulged at the viva voce examination when the examiner informed me that he had had great difficulty in reading my writing. Whilst another examiner on another occasion paid me the high compliment of saying that I was the most abominable writer he had ever had the misfortune to examine. So that how much credit I have had for what I have never known I dare not think.

THE TREATMENT OF SCURVY.

DR. REGINALD A. YELD (Whiteman's Creek, Okanagan Lake, B.C.) writes: In a book entitled *Builders of Canada*, edited by T. G. Marquis, I find a reference (on p. 14) to a treatment for scurvy which may perhaps be new to your readers. It is related there how the French sailor, Jacques Cartier, with his band of 110 men, were attacked by scurvy, while wintering at Stadacona, on the St. Lawrence, in 1536, to such an extent that only three or four healthy men were left to wait upon the sick. Twenty-six of his men died before April. Fortunately a young Indian guide named Doregaya, "who had himself been a sufferer from the scurvy, and had recovered, told Cartier of the remedy which had cured him—a decoction from an evergreen called Ameda, supposed to have been the spruce fir. The sick men eagerly tried it and drank it in such quantities that in six days they had boiled down a tree as large as a French oak; and very soon all the invalids were restored to health, courage, and hope."

SALVARSAN.

DR. THEO. M. KENDALL (London, E.C.) writes: When any remedy which has been brought out with a view to abort or cure a special disease becomes a cure-all, then one begins to doubt its efficacy. When salvarsan was first introduced to the profession certain claims were made as regards its efficacy in the treatment of syphilis, and every one was prepared to give the remedy a trial. Unfortunately, certain risks in the using were not at first understood, and at times one was confronted with seeming disaster. Further, the administration of the remedy was costly, and the unfortunate patient was put to some inconvenience at the time of administration. It cannot be said in all strict truth that this remedy has been a distinct success, nor can it be said that it has proved a certain cure. It certainly has lulled sufferers into a state of fictitious safety, but unfortunately this state has been succeeded by many relapses of the disease. Up to the present we have had no cogent reason presented to us for abandoning the old tried method of mercurial treatment of syphilis, which if persisted in will effectually abolish the disease, and we have no justification in testing this so-called remedy at the expense of the patient. Now that it has become a cure-all there is less reason why we should put any faith in it. My experience of twenty-six years has taught me to be very cautious before abandoning a tried treatment for one so chimerical as salvarsan, and the many relapses I have seen after its use confirm me more surely in this conviction.

THE PURCHASING POWER OF THE SOVEREIGN.

FOR the information of the Select Committee inquiring into the conditions of employment in the Postal Service, Mr. G. S. Barnes, C.B., of the Labour Department of the Board of Trade, has prepared the following table showing the fluctuations in value of a sovereign during the last eighteen years, measured by its capacity to purchase quantities of twenty-three selected articles of food:

Year.	s.	d.	Year.	s.	d.
1895	20	0	1904	18	0
1896	20	0	1905	17	11
1897	19	3	1906	18	0
1898	18	6	1907	17	7
1899	19	4	1908	17	2
1900	18	5	1909	17	3
1901	18	4	1910	16	11
1902	18	3	1911	17	0
1903	17	11	1912	16	3

ADVERTISEMENTS IN RELIGIOUS PAPERS.

THE parish magazine of Holy Trinity, Darwen (of which the Rev. Louis Savatard is vicar) for February 1st has a very outspoken article, entitled "Disgraceful Advertisements in Religious Papers." Several types are quoted, and in commenting upon them it is said that "in the lowest class of publications such advertisements are dishonest; in a religious paper they are a scandal."

SMELLING THE BABY.

W. sends the following conversation between two children overheard just before an operation was to take place in a private house.

Betty, aged 8: "I think, Rachel, we shall have a new baby to-day; I can smell it."

Rachel, aged 7, was the victim, and the nursery was being turned into an operating theatre.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	3
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.